

Development of Pocket Book Accounting Based E-Learning Media with Student Center Approach

Suci Rohayati and Han Tantri Hardini
Universitas Negeri Surabaya

Keywords: pocket book based e-learning, Journal adjustment, expert validation.

Abstract: Classroom learning activities require creativity and innovation, especially in delivering materials in the classroom. Innovation and creativity of lecturers will affect learning, especially in terms of students' understanding of service journal entry adjustment materials. Digital pocket book is a form of media development of lecturers in increasing interest and motivation of students in the class so that students are more active. The purpose of this development is to determine the feasibility of E-learning based pocket book by material experts and graphic media experts, as well as to find out the student's response to the pocket book. This type of research is a research of development of ADDIE (Analysis, Design, Development, Implementation, and Evaluation) model. Data analysis techniques used the results of the review and validation of material experts and media experts and student response results. The results of validation from the material experts obtained a score of 87.5% with very worthy category. The results of validation from the media expert obtained a score of 85.75% with very worthy category. While the student response of 87.08% with very good category. The average percentage of all experts' validation is 86.77% with very worthy criteria.

1 INTRODUCTION

The era of globalization requires the existence of qualified human resources (HR) quality, competitive in every field with a vision of excellence, professionalism, looking ahead, self-confidence and high self-esteem and have the skills that fit as needed. Appropriate form teaching in the face of the era of globalization is to use technology through the online system or in other words teaching through the Internet network. The government seeks to address the changes by developing KKNi curriculum for universities. It is hoped that the development of the curriculum can create a generation that is ready to face future changes that have a positive role to the world of education. Development of science and technology will further encourage renewal efforts in the utilization of technology results in the learning process. Arsyad (2011).

According to Suprianto (2010), the current learning activities can not only be done in the classroom or library. The advancement of the world

(especially internet) has given the possibility of creating virtual class (e class) in the form of e-learning, in which a teacher can manage the learning process and students can do learning activities as it is done in Classes with e-learning, learning activities such as reading learning materials working on problems and tasks, discussing with others and teachers, doing all experiments in the form of simulations and others. Through e-learning facilities, teachers can present learning materials, providing external learning re-sources to enrich the repertoire of online reading. The use of e-learning in college learning is highly recommended. According to Kala, et al (2010) in Vountilainen, et al (2016) explains that the purpose of e-learning is to develop online learning to be oriented to improve students and instructional instruction so as to enhance constructivism of learners.

According Sadiman (2012) Learning media can be defined as a tool in the form of physical and nonphysical used as an intermediary between teachers and students in understanding learning materials to be more effective and efficient so that the

lesson learned more quickly accepted students in-tact and attract students To learn more as well as to improve the quality of learning. Learning media as part of advocacy technology has potential benefits in solving learning problems: improving educational products, providing more individualized learning opportunities, providing a more scientific basis for learning and education processes more directly, Asyhar (2014).

The criteria in the election of the media developed should take into account the goals to be achieved, the characteristics of the students, the de-sired type of stimulus, the state of the background or the environment and the extent of the range to be served (Sadiman, 2010). According to Arsyad (2011) the common traits contained in the media are (1) Educational media has a physical sense that is known today as hardware (hardware), which is an object that can be seen, heard, or touched with the five senses; (2) The educational media has a non-physical understanding known as software (soft-ware) that contains the message contained in the hardware that is the content to be conveyed to the students; (3) The emphasis of educational media is on visual and audio; (4) The educational media has auxiliary tools in the learning process both inside and outside the classroom; (5) Educational media used in the context of communication and interaction of teachers and students in the learning process (6) Educational media can be used in bulk (e.g. radio, television), large groups and small groups (e.g. film, slide, video, OHP) , or individual (e.g. module, computer, radio tape / tape, video recorder); (7) Attitudes, per-artificial, organization, strategy, and management related to the application of a science.

Media development in the form of a pocket book is necessary because the pocket book has a small size, lightweight, can be stored in pocket and practical to carry and read (Sulistiyani, 2013). Ac-cording to the dictionary of Great Bahasa Indonesia (2008), my pocket but is a small book that can be stored in a pocket and easy to carry anywhere. To-day electronic books are in great demand because of their small size compared to conventional books and E-Books generally have search features, so words in electronic books can be quickly searched and found. In addition, the source of legal electronic books in Indonesia is not much, among others released by the Ministry of National Education (now the Ministry of National Education) with the opening of Electronic Pocket Book Accounting for student.

According to Morineau, et al (2005) e-book can potentially improve access to knowledge, especially in distance learning. Ardiansyah (2013) states that the

electronic book (abbreviated E-Book) or digital book is the book displayed on the computer screen. If the book generally consists of a collection of papers that can contain text or images, then the electronic book contains digital information that can also be texts or images. This research is supported by research from Putri (2014) entitled Development of Pocket Book as Learning Media on Special Journal Material of Accounting Company Cycle at SMK Ketintang Surabaya. The results of the research are very feasible. While the relationship between the development of electronic pocket books on learning outcomes is the result of research Anori, et al (2013) that the use of electronic textbooks in learning modes improve student learning outcomes. This is because in the electronic textbook present's material equipped with video and animation. Videos and animations display physical symptoms that students cannot see while in class. Various applications of the material being studied are displayed through these videos and animations. However, previous research results do not support the development of the need for e-books.

The result of research of e-book effect on students' learning result is Morineau research (2005) shows that electronic e-book obstruct sensory ability / recall the relationship of information learned by students, but for textbook is not so. The existence of textbooks improves reading ability and better remembering abilities. Based on observations made by researchers on the study program of accounting education force 2016 that all students already have mobile phones and majority based on android both to help search for lecture materials as well as for communication. The advantages of using digital pocket book application based on E-learning is its user friendly nature is easy to use in operation, practical users and not too much space in the system to install this application. The utilization of E-learning has not been applied to all subjects, especially in the introductory accounting courses in the accounting education program. Based on the above background, then for the formulation of the problem in this research are: How is the feasibility of e-learning based pocket book according to experts and how the student's response with the existence of pocket book based on E-learning on learning introductory course?. The purpose of this study is to: Know the feasibility of the product in the form of pocket book based on E-learning and to know the respond of students to the pocket book based on E-learning for the introductory course of accounting.

2 METHODS

This research is a research development or Research and Development (R & D) that serves to develop electronic digital pocket book. In this study, researchers used the type of development of the ADDIE (Analysis-Design-Develop-Implementation-Evaluation) model developed by Reiser and Mollen-da.

The researcher has modified the development stage of the ADDIE model, which consists of front-end analysis that aims to bring up the required problems, namely the use of inappropriate gadgets in supporting the learning process after it performs problem analysis, and needs analysis and ultimately raises the learning objectives. Subject of the experiment in this study 1) material experts, 2) media experts, 3) 20 mahadiswa as respondents. This research got data of quantitative and qualitative data. The preparation of pocket-based e-learning material is assessed feasibility by experts, material experts and media experts. Based on the assessment of experts conducted a limited trial, which aims to determine the response of students to the e-learning based e-book.

Instruments for data collection using an open questionnaire for review and using closed questionnaires for validation and student response questionnaires. The researcher analyzed the material and graphic expert's review sheet in qualitative descriptive. Then the expert validation sheet and student response questionnaire were analyzed by quantitative descriptions. From the results of the analysis, will be obtained conclusions about the responses and opinions of students on the media book pocket-based e-learning using Likert scale with the following criteria:

Table 1: Interpretation criteria student opinion.

Percentage (%)	Criteria
0-20	Not very good
21-40	Not Good
41-60	Enaugh
61-80	Good
81-100	Very Good

Source : Riduwan (2013)

3 RESULTS AND DISCUSSION

3.1 Result

3.1.1 Process Development

In the analysis phase there are two analyzes that led to the existence of learning objectives of problem analysis and needs analysis. The analysis stage of the problem in the 2016 accounting study program is that students are allowed to use cellular phones to support learning, but in fact the students abuse the use of cell phones to access the internet (social media). With the development of technology, students have a tendency to pay less attention to the material in the class so that less understanding of materials and students more focus smartphone. The introductory course of accounting, especially the material of adjusting entries, is difficult for some students. Serving students feel bored when doing learning because they are more interested in doing other things like chatting with friends or doing other activities with their smartphone. The reduced motivation and interest in student learning due to the more interesting smartphone than the book so to be anticipated by making teaching materials that utilize smartphones with android operating system.

The preparation of materials, questions, and discussions in this pocket book is made by itself with various references. The collection of backgrounds, fonts, images, and buttons the images presented in this digital pocket book are partially designed by the researchers themselves. Images combined with drawings of results from various sources. The collection of images, fonts and buttons is mostly downloaded from the web dafont.com and icon finder. The creation and combining of images is done using the Photo Scape program. The E-Learning-based e-booklet is built using hardware with 320 GB hard disk specifications, 4 GB RAM, and Windows 8 operating system. All components that have been prepared at the design stage are then assembled into a single unit using Adobe Flash. Components assembled into a single piece of teaching materials in accordance with the storyboard that has been made before.

Development stage at this stage presented the results of data collection from the study of material experts, linguists, and media experts on digital pocket book products, then revised according to the input given. The revised results based on the input of the material experts, linguists, and media experts will produce products which will be further validated by

material experts, linguists and media experts to determine the feasibility of teaching materials before being tested. The material review stage was conducted by two experts, namely Rochmawati, S.Pd., M.Ak, a lecturer in Accounting Education. The study phase of the expert Media is reviewed by Dr. Agung Listiadi, M.Ak according to eligibility criteria. Implementation phase at this stage after the validated product according to the eligibility criteria has been completed, then conducted limited trials to 20 students. Then do a questionnaire analysis with quantitative descriptive technique. The following is a table 2 and 3 about the validation results of the material experts and electronic media pocket book experts.

Table 2: Expert validation results material digital pocket book electronics.

Components Assessed	Percentage (%)	Information
Quality of Content and Purpose		
Accuracy	88	Very Worthy
Importance	86	Very Worthy
Completeness	87	Very Worthy
Interest / Attention	89	Very Worthy
Compatibility	90	Very Worthy
Average Feasibility Components	88	Very Worthy
Instructional Quality		
Provide learning opportunities	87	Very Worthy
Provide help to learn	88	Very Worthy
Motivating Quality	87	Very Worthy
Instructional Flexibility	86	Very Worthy
Average Instructional Quality Components	87	Very Worthy
Recapitulation of average validation from material experts	87,5	Very Worthy

Source: Data processed by researchers (2017)

Table 3: Validation results of media electronic digital pocket book.

Components Assessed	Percentage (%)	Information
Technical Quality		
Legibility	85	Very Worthy
Easy to use	87	Very Worthy
Display Quality	86	Very Worthy
Quality of Program Management	85	Very Worthy
Average Technical Quality Components	85,75	Very Worthy

Source: Data processed by researchers (2017)

3.1.2 Student Response

Student response is obtained from product trial. In this activity, students explained about the product then the researcher distributed the product of development result in the form of E-Learning pocket Book to be tested to the student. Then ask students to give opinions and assessment of the product development by way of fill out a questionnaire student response.

Table 4: Result of student response questionnaire.

No	Worthiness Component	Percentage	Criteria
1	Quality of Content and Purpose	85%	Very Good
2	Instructional Quality	87,5%	Very Good
3	Technical Quality	88,75%	Very Good
	Average	87,08 %	Very Good

Source: Data processed by researchers (2017)

3.1.3 Eligibility of a Digital Pocket Book and Limited Test Results

The following data results recapitulation validation of digital pocket book:

Table 5: Validation results and product trials.

No	Information	Percentage	Criteria
1	Material Validation	87,5 %	Very worthy
2	Media Validation	85,75%	Very worthy
3	Student Response	87,08%	Very Good
	Average	86,77	Very Worthy

Source: Data processed by researchers (2017)

3.2 Discussion

3.2.1 Development Process

Overall for the development process of E-Learning based pocket book as the introductory subject of accounting journal entry adjustment has been implemented in accordance with the development model of ADDIE consisting of stage of Analysis (Analysis), Design stage, Development stage), Implementation stage (Implementation), and evaluation stage developed by Reiser and Mollenda. Sugiyono (2013), states that research and development (R & D), is a research method that produces new products to test the effectiveness of a product.

3.2.2 Stage Analysis (Analysis)

At this stage the problem analysis and the analysis of needs, which will result in learning objectives. The accounting education program allows students to use smartphones in support of learning, but in fact students misuse the use of such smartphones to access the internet (social media). Along with technological developments, students have a tendency to connect with mobile communication devices or smartphones. This resulted in the students less understanding of the taught, no attention to the explanation of lecturers, and students only focus on their respective smartphone. As Oktiana's (2015) research puts that students tend to abuse the use of smartphones in the learning process.

The tendency to decrease interest in student learning due to more interesting smartphone than book can be anticipated by making learning media utilizing smartphone with android operating system. Needs analysis based on problem analysis, lecturers need teaching materials that can motivate students in learning activities. According to Prastowo (2014), teaching materials are needed to improve the learning process more effectively and interactively. E-Learning based pocket book is appropriate to motivate students in learning.

3.2.3 Formulation of Learning Objectives

The purpose of this stage is to determine the learning objectives by using an E-Learning based e-book, by introducing this application, so that students are motivated to learn and broaden their horizons. The results of the formulation of learning objectives by using a pocket book based on E-Learning for adjusting entries will be used as the basis for the

preparation of pocket book design as supporting teaching materials.

3.2.4 Stage Design (Design)

At this stage, a pocket book design based on E-Learning as supporting teaching materials will be developed. E-Learning pocket booklets are prepared according to the presentation stage. The design of the material content in the material of the book of pocket book is adjusted to the material presented into the instructional material of the pocket book as done by Putri (2014) in his research that the design of learning objectives must be in accordance with the concept of material that has been designed by researchers. The E-Learning e-booklet contains a summary of material, sample questions, and practice questions.

3.2.5 Development Stage

Solutions that have been designed are realized in the development stage. At this stage is reviewed by material experts and media experts.

3.2.6 Implementation Phase

At this stage, E-Learning pocket book that has been declared valid by experts will be done limited data retrieval to 20 students of accounting education at Faculty of Economics Unesa. The above development stage has been done in accordance with ADDIE Analysis (Analysis), Design phase (Design), Development stage (Development), Implementation stage (Implementation), and evaluation stage. The result of this development resulted in electronic pocket electronic book with a very decent category. Student response to the development of electronic pocket book is also very good category. Thus, with the development of this pocket book is expected to provide benefits for the learning media are expected to improve student learning outcomes accounting education program. It is expected to contribute to the development of learning such as the results of research Anori, et al (2013) and Jayakumar, et al (2015). The benefits of electronic pocket book is this book in the form of not printed with the aim of incorporating elements of ICT in teaching materials and allows students to interact directly can be brought wherever the students are located because it can be accessed via the internet. Similarly, as expressed by Jayakumar, et al (2015) the benefits obtained by students with the electronic facilities include Ease of access, Flexibility of learning, Easily updatable, Presented with multimedia, Economies of scale, Personalized learning.

4 CONCLUSIONS

Based on the results of research and discussion, it can be concluded the data as follows: worthiness e-learning based pocket book based on validation of material experts and media experts worthy to be developed. Student response on the development of e-learning based pocket book is very suitable to be used as supporting teaching materials. Application Pocket book based e-learning need to be developed for other subjects as supporting teaching materials This application should be installed on all other smartphone operating system besides IOS (Iphone Operating System).

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