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THE DEVELOPMENT OF ELECTRONIC ACCOUNTING BOOK OF SERVICE COMPANIES

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Abstract

This problem that often occurs in the world of education, especially in vocational high school students, are the difficulties of teaching materials / electronic reference books, teaching materials that are less attractive so students are not interested in reading them, even some students are reluctant to bring textbooks to school because of books it feels thick and heavy to carry everywhere. So that students Have basic knowledge of accounting, especially in accounting services companies only come from the teacher. The purpose of this research is to produce digital literacy in the form of electronic book (e-book) accounting for service companies, Test the effectiveness of using the product, and test the attractiveness of service company accounting e-books for Vocational High Schools. This research was conducted using the Research and Development (R&D) research method. The analytical tool used in this study is a correlational design and experimental design using ANOVA (Analysis of Variance). The results showed that: 1) The Accounting Services Company e-book developed was considered to be very suitable to be used as a learning resource. This is reviewed based on the results of the validation test assessment (material expert, linguist, and media expert) and student responses. 2) Company Accounting Services e-book for Vocational High School students can improve students' accounting abilities. Therefore, the digital teaching materials are effective and accepted 3) There are differences in learning outcomes between students on the initial test and the final test it can be seen from the value of t arithmetic ($10.071 > t$ table (0.679). Thus it can be said there are significant differences between the average value of students before and after learning by using digital teaching materials (e-books) accounting.

Jel Classification:

A33; Q55

Keywords: Electronic Book, The accounting service company

INTRODUCTION

Advances in information and communication technology currently have an impact on various aspects of human life, especially in the educational aspect. Education in the 4.0 industrial revolution era requires everyone to be literate in information and communication technology. Sophisticated technology makes learning more interesting and efficient so that students are active in gaining knowledge. This is also supported by the revised 2013 curriculum provisions namely student-oriented learning. This means that students must be more active in implementing the learning process.

Based on observations made by researchers in May and June 2019 of students majoring in Accounting at SMKN 4 Kab. Tangerang obtained information about the learning problems faced by students. The problem is the difficulties of teaching materials / electronic reference books, teaching materials that are less attractive so that students are not interested in reading them, even some students are reluctant to bring textbooks to school because the book feels thick and heavy to carry everywhere. So that students' knowledge of the basics of accounting, especially in accounting services companies only come from teachers.

The level of accounting ability becomes very important (Nugraha, 2013). The basics of accounting, especially the accounting materials of service companies

While the electronic book (e-book) is a digital version of the book which generally consists of a collection of papers containing text or images. E-books integrate sound shows, graphics, images, animations, and films so that the information presented is richer compared to conventional books (Nelson, 2008). Interactive e-books encourage students to be more involved in independent learning or student-oriented learning where students are required to actively seek and find answers to questions that arise in themselves (Pearson-Labs, 2014). Thus, this interactive e-book is

are used as a guide to understanding all accounting practices and theories. However, the reality is still the low ability of students' basic accounting concepts on service company accounting can be seen in the learning process. Problems from students were found that they generally only worked on accounting problems that were similar to example problems. But if the questions given are varied and different from before, then students have difficulty because they are unable to do it and unable to develop accounting abilities optimally.

Based on the analysis of the description above, the researcher seeks to make new innovations in the learning of accounting services companies to improve students' accounting capabilities through teaching materials in the form of digital literacy, namely electronic books (e-books). Although several digital literacy movements have been initiated and promoted by stakeholders, there has not been a movement focused on digital literacy for academic purposes (digital literacy for academic purposes). Referring to the 7 elements of digital literacy (Jisc, 2014), existing digital literacy movements, more on information literacy, media literacy, and Information and Communication Technology (ICT literacy) literacy. There has not been a movement focused on communication and collaboration (communication and collaboration), career and identity management, digital scholarship, and learning skills

expected to improve students' learning abilities, especially students' accounting learning abilities.

This research is in line with research conducted by Erah (2012) which states that the Ebook-based non-print teaching materials developed are effective in improving student learning achievement. Then added again by the research conducted by Ahmad Dedat (2017) which states that: Development / interactive E-books on trade company journal materials that are developed are very suitable for use according to / experts as teaching materials

because they meet the 4 eligibility components. from BSNP (2014), namely / components of content, presentation, language, and graphics. With the use of this teaching material, it will be able to improve students' accounting skills at trading companies.

But this is contrary to research conducted by Hessah Alshaya and Afnan Oyaid (2017) where the results of his study suggest that e-books act only has a positive impact on student cognitive learning outcomes, but e-books can also improve students' learning skills and students' skills in downloading and reading e-books and utilizing their characteristics. Also, with the e-book, it will be easier for students to

understand the subject matter content. However, this is contrary to research. Not only that, but this research also has different results from research conducted by Rosita (2017) which states that in addition to improving students' thinking abilities, the development of electronic books is also very effective in improving students' critical thinking skills.

The purpose of this study is to produce digital literacy in the form of electronic books (e-books) accounting for service companies, Test the effectiveness of product use, and test the attractiveness of service accounting e-books for Vocational High Schools.

METHODS

This research was conducted using the Research and Development (R&D) research method. Research procedures undertaken by researchers in this development are adapted from the development steps developed by Borg and Gall (in Sugiyono, 2009). The research development stage consists of 10 steps, namely: 1) potential and problems; 2) data collection, 3) product design, 4) product validation, 5) design revision, 6) usability test, 7) product revision, 8) product test, 9) product revision, 10) mass product manufacture. The implementation steps are adjusted to the needs of researchers. Given the limitations of time and funds owned by researchers, the steps are simplified into three steps of development.

Alessi & Trollip's (2001: 410) development model includes the planning stage, the planning stage, and the development stage. Product trials and research were carried out at SMKN which has a Study Program majoring in Accounting with the accreditation of "A". The product trial (e-book) will be conducted at SMKN 5 Tangerang Regency class X Accounting, amounting to 70 students and the sample in this study is students who are used as the experimental class, namely class X Accounting 1 totaling 35 people.

Data collection techniques were

carried out by distributing questionnaires and providing test instruments. A questionnaire is given to students and teachers to obtain data analysis of student needs for teaching materials that will be developed by researchers. The next questionnaire was given to the expert team (expert judgment) to evaluate the electronic books that were developed and the last questionnaire was a questionnaire used to obtain data on the attractiveness and ease of use of the book.

The data analysis technics used in this study consisted of 3 types, namely 1) Validation data analysis, 2) Practical data analysis, and 3) Data analysis of conceptual understanding. Digital teaching material products developed were tested by comparing with the conditions before and after using teaching materials (before-after) in the experimental class and the control class (Sugiyono: 2013). In this case, there is an experimental group and a control group. Thus the experimental design can be described as follows:

Information:

R = Student experimental and control groups

O1& O3 = Both groups were observed with a pretest to find out their initial abilities

O2 = Classes that follow learning with electronic books

O4 = Classes that do not take learning with electronic books

RESULTS AND DISCUSSION

The existence of digital books is very important in learning. Books are learning resources obtained by students. The textbook used must be by the needs of students and by the learning outcomes of the subject. Vocational high school students, especially in accounting, really need accounting reference books, especially digital accounting books. With this digital accounting book, students can learn anytime and anywhere so that students' accounting

abilities will be increased, students become more skilled in using technology and students can develop their abilities.

Company Accounting Electronic Book Validation Test Results Services for Vocational High School (VHS) Students

In conducting the validation test, researchers involve several experts in accordance with their fields. Based on the results of the expert validation test the following assessment results are obtained.

Table 1. Validator Assessment Results

No Aspect	Assessment			Average
	Expert 1	Expert 2	Expert 3	
1. Content material	22	22	22	
2. Presentation	21	21	22	
3. Language	22	22	21	
4 Attractiveness	22	21	21	
Total	87	86	86	86,33

(Source: Data Processing Result 2020)

From the data in the table, it is known that the average score of assessment is 84.33 with a very good category. In the validation process, there are three expert validations consisting of expert validation of subject matter content, validation of linguists, and validation of instructional media experts. The results of the validation are the material

experts suggest to improve the content of learning materials to be sharper and more applicable, linguists suggest using communicative language and the media experts suggest that the appearance of the media used is more interesting and varied. If viewed from the percentage, it can be known.

Figure 1. Percentage of Validation Test Result

The validation test results if presented 100% then divided into material expert validation by 34%, media expert validation 33%, linguist validation by 33%. From these results, it shows that the highest percentage is in the validation of material experts, which means the subject matter in accounting e-books of service companies has the highest value with material that is interesting and easy understanding by students. While the results/questionnaire responses of students obtained a percentage score of 95% with very good criteria. This is because all / students consider that the company's accounting material/services provided are easy to understand. So it can be concluded, that according to students' responses e-book accounting service companies developed very well used for accounting learning, especially for students of Vocational High School (VHS).

Company Accounting Electronic Book Trial Results Services for Vocational High School (SMK) Students

The effectiveness of the electronic book test results is determined by obtaining the initial value and final value. To determine the difference in the acquisition of these values, the difference test is carried out. The difference test here is intended to compare the average of a variable between the initial and final outcome values.² (average initial value is not the same as the average final grade). Based on the data in the table it can be seen that from the similarity value of the two variances obtained $F = 1,227$ which assumes that the two variants differ from the value of $t = 10,071$ with degrees of freedom (df) = 141, and $sig = 0.157 = 15.7\%$ (more from 5%). This means that H_0 is accepted, meaning that both samples have the same variance. Next selected Equal Variance Assumed, obtained $sig = 0,000 = 0\% \mu_1 \mu_2$ (average initial value is the same as the final grade), $H_1: \mu = 1$

μ The statistical hypothesis is used as follows. $H_0: <5\%$. This means that H_0 is rejected, meaning that the two populations have different mean completeness.

Test the similarity of two averages between the initial test and the final test using the following hypothesis.

H_0 : there is no difference in learning outcomes between students on the initial test and the final test.

H_a : there are differences in learning outcomes between students on the initial test and final test.

As for knowing the truth of the hypothesis used $t_{count} > t_{table}$. Based on the t-test price it is known that t is 10,071 with a significance level (sig) of 0,000 and degrees of freedom (df) = 141 with a 95% confidence level, it can be concluded that H_0 is accepted and there is a significant difference between the average student scores before and after learning by using digital teaching materials (e-books) accounting because $t_{arithmetic} (10,071) > t_{tables} (0.679)$. Thus, it can be said that digital teaching materials (e-books) accounting for vocational high school (VHS) students can improve student accounting abilities. Therefore, digital teaching materials are effective and accepted.

After conducting a field test to determine the effectiveness and attractiveness of the product. The instrument used to determine the effectiveness of the product is carried out with a test instrument. Meanwhile, to test the attractiveness of teaching materials used non-test instruments namely questionnaires. Based on the results of the field test, operational product improvements were made according to the criteria for developing teaching materials, namely display criteria, the attractiveness of teaching materials for students, and ease of use of teaching materials.

Table 2. Initial Product Draft Development of Digital Accounting Teaching Materials

1. Title of teaching materials

2. Learning Objectives

3. Material Description

4. Example Questions

5. Exercise

6. Glossary

7. Bibliography

Teaching material in the form of digital literacy namely the accounting electronic book was developed with the aim of facilitating the learning of individual students or groups. The aim of this development is to produce learning media in the form of accounting electronic books. The results of the trial development of this book were conducted on students majoring in Accounting at SMKN in two cities namely Jambi City and Tangerang namely at SMKN 5 in Tangerang Regency and SMKN 2 in Jambi City.

The development of an accounting firm's electronic book services provides effective results in the implementation of learning both classical learning and virtual learning. These results are in accordance with research conducted by Ahmad Dedat (2017) which states that: 1) Development / interactive e-book on adjusting trade company journal material that is developed is very appropriate to be used according to / experts as teaching material because it has fulfilled 4. eligibility components of BSNP (2014) namely / component content, presentation, language, and graphics. 2) The response/students to the interactive e-book on the journal material adjusting the positive trading company with criteria / very good.

However, this research contradicts research conducted by Hessah Alshaya and Afnan Oyaid (2017) about Designing and Publication of Interactive E-Books for Students of Princess Nourah bint Abdulrahman University: An Empirical Study. Where the results of this study explain that the action e-book only has a positive impact on students 'cognitive learning outcomes, but e-books can also improve

students' skills in accounting learning or skills in downloading and reading e-books and utilizing their characteristics. Also, they believe in the usefulness of e-books that can facilitate students in understanding the content of subject matter and they intend to continue using e-books in the future. In addition, Gonca Cumaoglu, etc (2013) also stated that around 68% of students stated that they read one book a week and 62% indicated that they were e-book readers. In addition, there is a significant relationship between the social environment and student reading habits. Students put forward the superiority of accessibility (68%) of e-books and stated that they mostly read e-books for research (81%). The most popular e-book format among students is the Portable Document Format (pdf) (73%), while computers are the most commonly used e-book media (60%).

From the results of the research and the interrelationship of previous studies, the overall e-book can provide benefits for students, e-books also provide facilities for students to understand the subject matter. E-books are in the form of soft files so that they are easy to store and use offline. So students can study anytime and anywhere.

CONCLUSION

Conclusions include: The Company Accounting e-Book Services developed are considered to be very suitable to be used as a source of learning. This is reviewed based on the results of the validation test assessment (material expert, linguist, and media expert) and student responses; the Company Accounting Services e-book for Vocational High School students can improve students' accounting abilities. Therefore, digital

teaching materials are effective and accepted, and then, there are significant differences between the average value of students before and after learning by using accounting digital teaching materials (e-books).

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