

# The Development of Contextual based Accounting E-Module to Improve Students' Learning Motivation

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Abstract: This research and development aimed to create an electronic module of contextual based which able to improve student's motivation. This development product used the modification of research and development stages based on Borg and Gill statement, which consists of (1) analysis of initial needs (2) planning (3) product developing (4) expert validation (5) product revision (6) main field testing (7) final product revision. Quantitative and qualitative data were used as the type of this research. The content validation was conducted by using questionnaire of scoring scale based on Likert's scale. The last product of this research and development was contextual based e-module which designed to increase students' motivation. Based on the analysis of the overall validation, the overall percentage average was 89,69% which means valid. Based on the test of Paired Sample T-Test, it showed that the significance was  $0,000 < 0,05$ . Therefore, it can be concluded that contextual based e-module is feasible and effective for the learning of accounting.

## 1 INTRODUCTION

The quality of life of a nation is determined by educational factors. Education has an important role in creating a smart, peaceful and democratic life. Education is a manifestation of a dynamic and developmental human culture. Therefore, changes or developments in education are things that should actually happen in line with changes in the culture of life. Changes in the sense of improving education at all levels need to be continuously carried out in anticipation of future interests (Trianto, 2010: 1).

Recognizing the importance of education, the government has made various efforts, one of which is related to the development and improvement of the curriculum. The 2013 curriculum used today is the result of improvements and reinforcement of the previous curriculum. The 2013 curriculum is aimed at producing productive, creative, innovative and effective Indonesian people; through strengthening integrated attitudes, skills and knowledge (Mulyasa, 2014: 65). The 2013 curriculum is implemented at all levels of school starting from SD / MI, SMP / MTs, SMA / MA / SMK.

Vocational High Schools (SMK) are educational institutions that equip students not only with

knowledge but also skills as a life skill. It aims to prepare graduates as skilled and able to compete in the world of work. Vocational students as Human Resources who have superior competencies and characters are needed in the era of globalization in order to be able to compete in a healthy manner so that they are able to develop competencies in their entirety to survive and exist in this era. Therefore, teaching materials both applicable theory and practice must be given early, in the hope that SMK graduates have the competency according to their needs. Therefore, adequate education is needed and designed based on real needs.

Based on this fact, contextual learning feels right to represent it. Through this design, students will be accustomed to building their own knowledge based on real contexts that are meaningful to themselves. Contextual learning (Contextual Teaching and Learning) according to (Sanjaya in Sa'ud, 2008: 162) is a learning approach that emphasizes the process of full student involvement to be able to find material that is learned and relate it to real life situations so as to encourage students to be able to apply it in their lives. In contextual learning the teacher tries to give something tangible in accordance with the environment around the child so that the knowledge gained by the child in the classroom is the

knowledge that is built and owned by themselves. That way, the application of contextual learning in schools will be meaningful for students to be able to solve problems, think critically, carry out observations, and draw conclusions in the long term.

One aspect that needs to be considered in this implementation effort can be realized in the form of adequate teaching materials and in accordance with the curriculum that applies as a guide in the learning process. With the existence of teaching materials will facilitate the learning process of students. According to Sa'ud (2008: 214) teaching materials or learning materials are learning materials that are directly used for learning activities. Teaching materials are categorized into two, namely printed and non-printed materials. Printed teaching materials include textbooks, modules, handouts, and LKS. While no printed teaching materials such as audio cassettes, video cassettes, VCD, and films.

Muslich (2010: 30) states that the teaching materials contained in textbooks circulating in the market are often biased and stale. This happens because between the time of the preparation of the textbook and its usage time is too long even the teaching material is not in accordance with the conditions and environment of the students. This is indicated by the fact that the existing teaching materials are still based on KTSP. The Electronic School Book (BSE) provided by the government on the pusurbuk page, LKS, and existing modules have not supported the learning expected by the curriculum now. Circular module form teaching materials used in schools usually only contain discussion material and practice questions, so students cannot develop their creativity.

Whereas the module that is expected now is a module that not only contains material and exercises questions, but also contains processes or activities in learning to acquire and develop various skills. Currently there are modules available, (1) they are not contextual, (2) provision of accounting knowledge and skills still uses a lot of accounting textbooks, (3) the teaching materials do not use real business transactions around students, (4) the form is still conventional or textbook oriented. While the contextual module will help students in solving problems, exercises, and assignments in real terms. Submission of material in the module begins with phenomena that are close to students. Starting from special things that are in the environment around students, after that explained the underlying concept. The concept received from the module is expected to be able to be applied by students in the environment.

Research and development related to contextual-based modules are not the first research done. Dewi (2014) conducts research and development of contextual learning module on accounting cycle material. The development model used the Borg and Gall development model. Ulfa (2014) conducted a research and development of contextual learning modules in the discussion of material processing journal entries, with the Borg and Gall development model. Wardani (2016) conducted a research and development of contextual learning modules on static fluid material, with Thiagarajan's development model, the 4D model. Of the three previous studies, the modules that developed contextual values only existed at the beginning of the material in the form of examples of company illustrations and at the end of the material in the form of independent tasks with everyday problems. So, the modules that have been developed are not yet contextual, still seem textual. Impressed textually because the core material of teaching materials is still exactly the same as the books circulating. In addition, it only contains one competency standard and is still printed or paper-based.

Print-based or paper-based teaching materials that are used in learning so far, are static and abstract which make students feel bored quickly because the material is dominated by text, in terms of distribution is relatively long. Paper-based books that refer to the old curriculum also stuff students with concepts that must be memorized, and do not invite students to think as a process of constructing their knowledge and experience to find their own concepts that must be understood. That is, existing paper-based books generally stuff students with facts, concepts, principles, and procedures that must be memorized (Komalasari, 2011: 44)

In line with previous research and reviewing the constraints of existing teaching materials, this study tries to study the development of contextual based accounting modules. The module that will be developed in this study is a digital module or electronic module or e-module that is easily accessible via a laptop or personal computer (PC). This is because the progress of information and communication technology has shifted the era of printing machines and replaced them with the digital era so as to provide opportunities for the world of education to develop teaching materials that are more attractive and adaptive in accordance with the demands of globalization and technological progress. Like the Readmill study which shows that people spend more time reading e-books on digital devices than opening books in general. The ability of

technology to send information quickly, precisely and interestingly in multimedia has also made learning more enjoyable.

A technology change, especially information technology, brings a new paradigm in material learning and learning methods. From previous research conducted by Pramesti (2014) in the form of digital modules using flipbook maker software, it shows that students have increased their learning outcomes by 87% after using digital modules. In line with the research, Anori et al (2013) showed that the use of electronic modules in direct learning models had a positive influence on student learning outcomes compared to those who did not use electronic modules. Andayani et al (2009) also showed that learning style preferences and packaging choices of teaching materials for students (students) accounting programs began to shift from textbook oriented to digital teaching materials. Electronic module content can always be accessed regardless of time and place, can be read on a personal computer (PC) or e-book reading device that is easy to carry. Electronic modules are superior in terms of accessibility, functionality, and cost-effectiveness.

Computer-based teaching materials also have advantages and disadvantages. Prastowo (2015: 332) revealed several advantages, among others: (1) can display information in the form of text and graphics, (2) interactive, (3) can manage student responses, (4) can be adapted as needed, (5) can control other media hardware. While the shortcomings of computer-based teaching materials are: (1) need a computer and program knowledge, (2) need special hardware for the development process and its use, (3) incompatible types.

In addition to e-modules as visual teaching materials, the role of teaching videos as audio-visual teaching materials is also important in the learning process. The function of teaching videos in the learning process is important in improving the quality of the learning process, especially helping students to learn because in learning activities the obscurity of the material delivered can be helped by using video as an intermediary. The use of animated videos will attract students' attention and interest in learning. The sense of sight and hearing of students can be active together. As explained by Prastowo (2015: 301) that video is a teaching material that combines two materials, namely visual and audio material. Auditive material is intended to stimulate the sense of hearing, while visual material to stimulate the senses of sight. In addition, the use of animated videos can clarify, uniformize, and

streamline the presentation of learning material. So, the use of animated videos in learning aims to improve cognitive, psychomotor, and affective abilities.

E-module with innovative and attention-grabbing videos is used as a stimulus (stimulation) in the learning process that is useful to see students' responses in increasing the curiosity and motivation of the participants. The more sense devices used to receive and process information the more likely the information is understood and can be maintained in memory. This is supported by previous research conducted by Purwanto et al. (2015) showing that teaching materials and learning videos are very suitable for use and can increase motivation and learning outcomes.

Based on the above requirements, the development of contextual-based e-modules will be made with the help of the Adobe Animate CC program, due to the small file size with good quality, easy to integrate with other programs, the evaluation does not need to use supporting programs, and e-modules generated also interactive.

The purpose of this research and development is to produce contextual-based electronic modules that can increase student motivation in vocational schools.

## 2 RESEARCH METHODS

The research model used in this study is a development research model. Sukmadinata (2013: 164) suggests that research or development research is a process or steps to develop a new product or improve an existing product, which can be accounted for.

This research and development uses the Borg and Gall (1983) development model that has been modified and adapted to needs, namely (1) initial needs collection, (2) planning, (3) product development, (4) expert validation, (5) revision, (6) product trials, (7) product revision. Validation techniques using questionnaires. Data collection instruments in the form of questionnaires are used to collect data about assessments from material experts, design experts, and assessments from students. The type of questionnaire used was a closed questionnaire using a Likert scale. The data analysis technique used in this development is using percentage descriptive analysis techniques. While the effectiveness of the product is measured using the t-Test, namely Paired Sample t-Test. The subjects of the trial or validator in this research and

development are expert groups, namely material experts and experts in the design of teaching materials, as well as field trials in class X students and teachers of Singosari 3 Muhammadiyah Vocational School majoring in accounting.

### 3 RESULTS AND DISCUSSION

Based on the assessment of the product through a series of trials and revisions that have been carried out, the product is declared to be valid and feasible with the acquisition of an overall percentage of 89.69%. The contextual based e-module test results are summarized in Table 1.

Table 1: Validation Analysis

No	Aspect	Percentage	Note
1	Average of material expert validation	90%	Valid
2	Average of design expert validation	96,33%	Valid
3	Average user test (teacher)	84,33%	Valid
4	Average user test (students)	88,10%	Valid
	Total Average	89,69%	Valid

The results of data analysis of student learning motivation using Paired - Sample t-Test are shown in Table 2 below

Table 2 Paired-Sample t Test Result

Average motivation to learn before	64,97
Average motivation to learn after	72,48
The significance value of the Paired-Sample T-Test	0,000

Based on Table 2 it can be seen that the significance value of Paired-Sample t-Test is  $0.000 < 0.05$ , which means that there are differences in learning motivation between before and after using contextual-based e-modules. From the results of the Paired-Sample t Test also known the average student learning motivation from 64.97 to 72.48 after using a context-based e-module. Based on the results of expert validation and field trials, the product produced is valid and feasible. Paired Sample T-Test test results also show that the product produced can

increase student learning motivation. So it can be concluded that contextually based e-modules are feasible and effective to be used in accounting learning.

The results of the research and the development of contextual-based e-modules are: (1) e-modules are arranged based on the characteristics of the module, and in the form of soft files that can be read on a laptop or computer, (2) e-modules containing accounting material accompanied by images, audio, video, sample questions, evaluation and assessment, so that it can help students to learn independently, (3) there is audio as backsound as well as illustrations in the form of pictures and videos and attractive colors aiming to help attract students' interest in learning material and increase accounting motivation, (4) material and examples that are presented briefly, solidly, and clearly based on the environment around students.

Based on the results of research and development, the e-module is supported by several characteristics, namely self-instructional, self-contained, stand-alone, adaptive, and user-friendly.

1. Self-instructional, indicated by the presentation of standard competencies and basic competencies, learning objectives, instructions for using e-modules. students can use e-modules according to the instructions in the e-module. With these instructions students can learn independently and not depend on the teacher.
2. Self-contained, indicated by the presentation of the material in its entirety. All learning material from one competency unit or sub competency learned is contained in one teaching material in its entirety.
3. Stand alone, the teaching material developed does not depend on other teaching materials. This is evidenced by the material needed by students already contained in the e-module. The material in the e-module is also quite complete according to the learning objectives to be achieved. In addition, the material is also accompanied by an example of the problem and how to solve it that can help students understand the material. In the evaluation work also displayed the results obtained as well as the answer key so that students can match the answers to the results done with the aim that students can know their abilities.

4. Adaptive, the e-module that is developed has high adaptive power to the development of science and technology. This is evidenced by the packaging of materials in the form of service companies that are developing in the environment around students, as well as the form of an electronic module in accordance with technological developments. Students can read e-modules with the help of a laptop or computer anywhere
5. User-friendly, every instruction and information disclosure that appears to be helpful and friendly with the user, including the ease of the user in responding and accessing as desired. This is evidenced by students being able to use and learn e-modules by following the instructions in this contextual-based e-module.

The following is a review of products that have been revised and are the final product in development research conducted by researchers.

### 3.1 Key Characteristics and E-Module Components

Selection of good components and proper use of the products produced are expected to produce or create products that can improve student learning motivation. The resulting e-module has a core component, namely the title, instructions, material, and evaluation. In addition there are additional menus, namely references, glossaries and profiles. This is in accordance with Surahman's statement (in Prastowo, 2015: 113) that the module is technically arranged in 4 elements, namely (1) title, (2) general instructions, (3) material, (4) evaluation.

#### 3.1.1 Instructions

The instructions display contains instructions for using the product that is equipped with a function from each button. The instructions placed at the beginning of the display can make it easier for users to run and use e-modules based on contextual. In addition to reading the instructions for use, students are also advised to read the study instructions. Instructions for learning to function to provide an explanation of the competencies and learning objectives that must be achieved by students after learning the material contained in the context-based e-module, and to provide guidance to students about the order of material to be studied. So that students

learn the material in a coherent way and more easily understand the material.

This is consistent with Arsyad's (2005: 180) statement that guidance instructions need to be informed before learning takes place for students so that students understand how to operate.

#### 3.1.2 Material

Learning materials are arranged up to date in accordance with the latest developments. In addition the module presents examples that are in accordance with real conditions in the real world. This is so that students are able to be actively involved in being able to find material that is learned and relate to real life situations, so as to provide an overview of accounting practices in the real world.

E-module developed based on contextual, including:

1. Constructivism, in this e-module, the component of constructivism lies in the appearance of the initial material of the e-module. There are illustrations and articles that can help students in constructing knowledge.
2. Questioning, questions in e-module can encourage students' curiosity and thinking skills.
3. The inquiry, after constructing knowledge and with questions, illustrations and views about the material in the e-module students will find facts. So that knowledge and students are obtained not from the results of remembering, but the results of finding.
4. Learning community, in this e-module some activities also require students to work together with others. Learning outcomes are obtained from sharing between friends, between groups, and between students and the surrounding environment.
5. Modeling, shown by giving examples in this e-module are examples that are close to students' lives. For example, service companies that are exemplified are GoJek, Mahameru Jaya Travel, photocopies, and other service companies that are often encountered by students. Articles presented in the e-module are also related to the material.
6. Reflection is a way of thinking about what you have just learned or think back about what you have done in the past. In this e-module also presented a "Reflection"

column to find out the students' response to the learning that has been done such as what knowledge is obtained, impressions, difficulties and suggestions for learning that has been done in order to improve the next learning.

7. Authentic Assessment, with group activities that require students to actively seek information and work in groups can provide opportunities for teachers to perform authentic assessments. Authentic assessment can be done by the teacher when students make observations, group discussions, case study discussions, and independent assignments.

This is in accordance with the Directorate General of Primary Education (in Komalasari, 2011: 11) which explains that there are seven components in the contextual approach, namely (1) constructivism, (2) questioning, (3) inquiry, (4) learning community, (5) modeling, (6) reflection, (7) authentic assessment.

Integration of the contextual approach was put forward by Blanchard (in Komalasari 2011: 16) where linking material taught with real-world situations and encouraging students to make connections between the knowledge they have with their application to their lives. Therefore, educators do not need to change the existing subject matter, but use the real events and conditions that surround the students in the subject matter.

The material in the e-module is presented in brief, concise, and clear. This is done to avoid text density which will reduce the quality and benefits of the displayed text. According to Alessi (1991: 368), pay attention to the aesthetic quality of each display. The display should be muted, without too much information being shown at once, and should be relevant to the goals of the lesson. Meaning, pay attention to the aesthetic quality of each presentation. The presentation should be neat, without too much information being displayed at a time, and should be relevant to the learning objectives.

### 3.1.3 Evaluation

Evaluation is done to find out how far the learning objectives are achieved. Evaluation of e-module consists of 2 types of questions, namely multiple choice questions (with interactive quiz format) and essay questions. Multiple choice questions were arranged randomly with the aim of the students as the trial subjects unable to commit fraud in the work

on the questions. Evaluation results will automatically appear when the user finishes the evaluation question.

In essay questions, users can answer questions directly in the place provided. After filling in the answer, the user can press the "check answer" button to see the discussion of the answer regarding the evaluation that has been done, with the correct answer, because if the answer is not correct then the discussion will not appear.

### 3.1.4 Etc

The glossary is a section that contains the definition or understanding of terms in the accounting services company. The reference page is a section that contains books or other sources that can be used in studying accounting services companies. The profile page contains the profile of the developer, which contains the background of the compiler and mentor of the contextual based e-module research and development.

The E-module is equipped with illustrations in the form of pictures and videos aimed at attracting students' interests so that it helps students in learning material and enhancing accounting learning motivation. E-module with innovative and attention-grabbing videos is used as a stimulus (stimulation) in the learning process that is useful for seeing students' responses in increasing students' curiosity and motivation. The more sense devices used to receive and process information the more likely the information is understood and can be maintained in memory. As explained by Prastowo (2015: 301) that video is a teaching material that combines two materials, namely visual and audio material. Auditive material is intended to stimulate the sense of hearing, while visual material to stimulate the senses of sight.

This is in accordance with the empirical study through an experimental method with Paired Sample t-Test on students of class X Muhammadiyah 3 Vocational School in Singosari. The results showed that the significance value of the Paired-Sample t-Test was  $0.000 < 0.05$ . This shows that contextual-based e-module is proven to increase student learning motivation. Increased student learning motivation is known by analyzing differences in the results of student learning motivation questionnaire before using e-module with the results of questionnaires after using e-module.

## 4 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of expert validation and field trials, the product produced is valid and the Paired Sample t-Test results show that the product produced can increase student learning motivation. By paying attention to the results of product development in this study, in order to have benefits that mean to many parties it is necessary to provide some related advice. The next suggestion to the developer is to develop products with other accounting materials. In addition, the products to be developed further can not only be operated on laptops or computers, but also on smartphone operating systems, such as Android, Blackberry, iOS (iPhone Operating System), and Windows Phone. To find out the appearance of the e-module, readers can contact email [erenprinstin@gmail.com](mailto:erenprinstin@gmail.com)

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