
Collage Students' usage of E-Module Practicum for Increase SRL

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Abstract

Independent and skilled learning can be realized with comprehensive and adaptive teaching materials through a Practicum E-Module which is developed as a learning resource as well as a practical tool, based on 3D Pageflip Professional which contains text, images, animation, audio, video, links and 3D effects. The presentation of the contents of the practicum E-Module is packaged in a clear, complete, and coherent manner to make it easier for students to study independently without depending on the lecturer. The Practicum E-Module can be accessed offline via a laptop or computer without supporting applications. This type of research is Research and Development in the subject of Financial Administration, State University of Malang. Meanwhile, the research instrument consisted of a material expert validation questionnaire, an E-Module expert validation, a user trial questionnaire, and a SRL questionnaire. The result of this research is an E-Module that supports practicum activities. This E-Module has been validated by material experts and E-Module experts as well as being tested on users whose results are very feasible and are able to increase SRL with high categories. So that the E-Module Practicum can realize independent learning.

Keywords: E-Module Practicum; 3D Pageflip Professional; Self-Regulated Learning.

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1. Introduction

Learning in the 21st century is learning that cannot be separated from technology [1]. In addition, the rapid development encourages creativity and high competitiveness. Therefore, the world of education needs to prepare all developments, one of which is through technology. The learning process through technology can improve the quality of learning as well as improve student academic performance [2,3]. The involvement of technology makes the learning process more flexible so that it encourages independent learning in students [4]. Talking about the learning process, of course, cannot be separated from learning resources, one of which is modules. Module is a teaching material that encourages learning activeness and independence [5]. Technological developments also encourage module development, from print to electronic, therefore an electronic module is developed. The E-Module being developed is emphasized on practicum activities for the Financial Administration course. E-Module Practicum is an electronic module that is made as literature in the student learning process which is applied through practicum in which the form of learning implementation is tailored to the person by dividing the learning material into several parts, each of which only consists of one or several discussion points. The Practicum E-Module for Financial Administration courses provides practicum activities as a training tool for students to improve their understanding of Financial Administration. The 3D Pageflip Professional application program was chosen as the basis for the development of the Practicum E-Module because of the variety of features it has. Pageflip Professional 3D application program also offers advantages including complete navigation buttons, there is a reverse effect on the module so that the resulting effect looks real and contains images, animation, audio, video, flash [7].

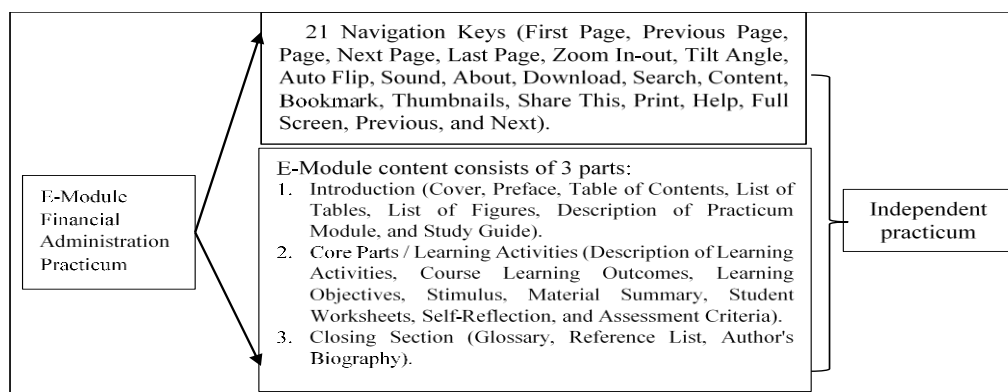


Figure 1: Development Design of the E-Module Practicum, Financial Administration course

1.1. Practicum Module

Module is a form of printed teaching material that provides independence values to students. There are several types of modules, one of which is a practicum module. The practicum module has a specific aim to provide an important role in increasing learning independence through the experiences presented. In addition, the module contains a set of simple exercises, this is why this type of module is called a practicum module. Fidiana explained that the practicum module is a type of module that is made as literature in the learning process for students which is applied through practicum with the form of learning implementation tailored to the person by

dividing the lesson material into several parts, each of which only consists of one or several discussion points [3]. Meanwhile, Dewi mentioned that the meaning of the practicum module is a practical module in which there is a set of practicums which is packaged in a simple way and follows the contextual learning component [8]. The practicum module is used as a guide to carry out practicum to improve skills. Skills are one of the main assets in competition in the current global era [9]. Thus, this module was developed to meet the needs for increasing competence of students in forming skilled and responsive resources.

1.2. Practicum Module

E-Module is a form of presenting a non-printed module, in softcopy form which makes it very easy to use, can use a computer or laptop. The electronic module is a form of presenting teaching materials to support independent learning which in use aims to understand the material being studied. The electronic module is a form of presentation of independent learning materials arranged systematically into the smallest learning unit in order to achieve learning objectives and presentation of learning materials in electronic format in which there are animation, audio, and navigation which make it more interactive [10]. Therefore, the E-Module is very easy to use, besides containing text, the E-Module can also be added with audio, video, and links so that it can create attractiveness and be able to make the learning process interactive and fun.

1.3. 3D Pageflip Professional

3D PageFlip Professional (2012) mentions 3D PageFlip software is "a software that converts your still PDF files into animated 3D page turning books which include a multimedia music and videos on pages, links, images, button, and animation to become a 3D FlipBook" [11]. Based on the above statement, it is known that 3D Pageflip Professional is a software that can convert PDF files into an animated 3D book containing music, videos, images, buttons, and animation. 3D Pageflip Profession-al is a software that can be used to produce teaching materials with 3D effects. Hull & Chapparro mentioned that 3D Pageflip Professional is a software that is used to make E-Module [12]. 3D Pageflip Professional is a software creation tool with 3D effects that has complete navigation, so it can produce interesting and lifelike effects. The 3D Pageflip Professional facilities include loading images, animation, video, flash audio, 3D effects, and complete navigation as well as several E-Module format options, namely Exe, Zip, Html, 3DP, Screen Saver, and others. This Professional 3D Pageflip application also provides E-Book types such as magazines, documents, and so on. 3D Pageflip Professional is able to produce an interactive E-Module as compared to regular print modules. This application has the facility to produce teaching materials in the form of modules that can look more attractive.

1.4. Self-Regulated Learning

Butler and Winne describe Self-Regulated Learning (SRL) theory as a "lens model" in which learning tasks are mediated by a set of beliefs about the subject matter, the learning process, and the products of learning [13]. Furthermore, Pintrich explains Self-Regulated Learning as a learning situation in which learners have control over these learning activities, both through knowledge and application of appropriate strategies for themselves, understanding their tasks, strengthening decision making, and learning motivation. [14]. Bell & Akroyd also

mentioned that Self-Regulated Learning is a part of cognitive learning theory with three aspects that can affect student achievement, including aspects of behavior, motivation, and environment [15]. Some definitions of Self-Regulated Learning show a positive impact on learners in learning activities, which in Self-Regulated Learning learners involve various things within themselves, both internal and external. Students with Self-Regulated Learning abilities can use their thoughts, feelings, and actions to achieve the goals they want to achieve. In addition, students with Self-Regulated Learning abilities will also plan their learning activities in advance to fit the targets and goals they want to achieve. Self-Regulated Learning as an active constructive process in determining learning outcomes will monitor, regulate, and control cognition, motivation, and behavior to determine compliance with the goals and contextual conditions of the students' environment [16]. The existence of Self-Regulated Learning provides a role for students independently in regulating, controlling, or actively controlling cognition, motivation, and behavior in learning activities so that their goals are achieved. In line with the above understanding, Self-Regulated Learning is the ability to be an active participant in meta-cognition, motivation, and behavior in the learning process [17]. In self-regulated learning, students will independently organize and determine learning activities in accordance with the results of their observations, evaluations and self-improvement. After that, students will carry out activities that have been designed to be evaluated in order to measure the results or achievements of the successes obtained or the failures obtained.

2. Method

This research and development uses a modified model from Borg & Gall, including: 1) Research and information gathering, as a phase of information search in the field which includes observation and interviews; 2) Planning, as the stage of determining the concept of the developed product, including determining the design of the Practicum E-Module, as well as the material according to the Semester Class Plan (RPS); 3) Development of the initial product format, which is the stage of designing and creating a practicum E-Module product for the Financial Administration course based on 3D Pageflip Professional; 4) Expert validation, as a stage for determining product feasibility by two experts, namely the material expert and the E-Module expert; 5) Product revisions, corrective actions taken on products after the validation stage; 6) Limited trial, testing the use of the product represented by 9 students as the sample; 7) Product Revision, corrective action taken after carrying out the limited trial phase before the product is deemed truly feasible and according to the needs in the field; 8) Field trials, field trials conducted on 35 students to determine the feasibility of products in the field; 9) Final revision, corrective actions taken after conducting field trials to produce the final product and 10) The final product, the stage of producing a product that is feasible and according to field needs.

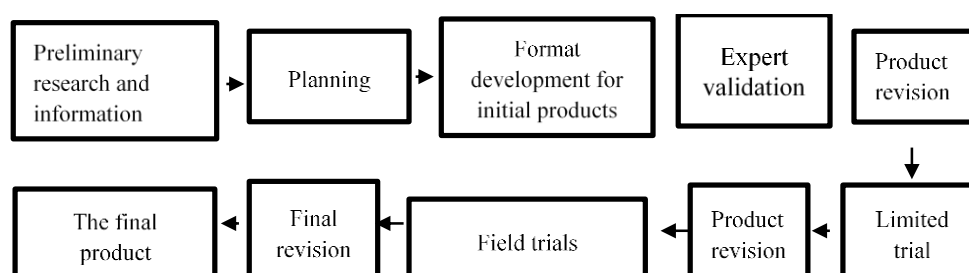


Figure 2: Research Steps

2.1. Research Design

The research design was conducted using two classes; First, conducted in the experimental class, which is a limited trial class by selecting 9 students who are appointed as the sample class before conducting the field trial phase. Meanwhile, the second, field trial class, is a class for testing products in a larger number of 35 students. Through both, researchers can produce a viable final product that can be applied in the field. At the user trial stage, the Practicum E-Module for the Financial Administration course based on 3D Pageflip Professional has first received expert validation. The trial phase by the user was carried out to determine the feasibility of the product for the user, as well as measuring the level of Self-Regulated Learning from the use of the E-Module Practicum for the Financial Administration course based on 3D Pageflip Professional. Measurement of the feasibility and level of Self-Regulated Learning is done through filling out a feasibility questionnaire and a Self-Regulated Learning questionnaire. The filling out of the questionnaire is carried out by the user after carrying out a series of activities, that is, the user is asked to see all parts of the product, the user is also asked to study one of the Learning Activities in the E-Module Practicum and do some practicum contained in the E-Module Practicum independently without the help of a lecturer. The purpose of this series of activities is that the user completes the questionnaire correctly based on the learning experience using the E-Module Practicum for the Financial Administration course.

2.2. Population and Sample Research

The population in this study were students of the Undergraduate Office Administration Education Study Program at the State University of Malang. The field trials were taken from M class, the Office Administration Education Undergraduate Study Program, totaling 35 students. Meanwhile, the limited trial was taken by 9 students from the MM class, the Office Administration Education Undergraduate Study Program with heterogeneous abilities (low, medium, and high).

2.3. Research Instrument

The data collection instrument was carried out by distributing questionnaires for validation from two experts, consisting of material experts and E-Module experts, user trials, and the level of Self-Regulated Learning. The data obtained are in the form of quantitative and qualitative data. Quantitative data were obtained from questionnaires while qualitative data were obtained from filling in criticisms and suggestions on the questionnaire sheets. Data collection techniques were carried out by distributing questionnaires, filling in criticism of suggestions, and interviewing activities. As for the user trial, filling out the questionnaire consisted of a product feasibility questionnaire and a Self-Regulated Learning level questionnaire. The questionnaire was filled out after using the E-Module Practicum in Financial Administration subject which was based on 3D Pageflip Professional.

2.4. Data Analysis

The data analysis technique on product feasibility uses a percentage total score, then categorized using 5 levels of validity, namely very valid, valid, less valid, invalid, or very invalid. This aims to ensure product feasibility.

Meanwhile, Self-Regulated Learning uses a total score as a percentage by categorizing it on 3 levels of Self-Regulated Learning, namely high, medium, or low categories; the goal is to ensure the product's ability to enhance Self-Regulated Learning.

3. Result

3.1. The Procedure of Making E-Module Practicum for Financial Administration through 3D Pageflip Professional

The E-Module for Financial Administration Practicum is made from a PDF format file on a 3D Professional Pageflip into an E-Module with the EXE format.

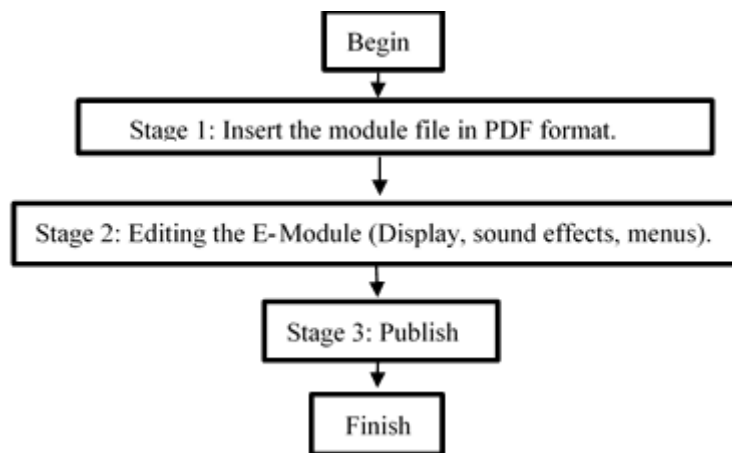


Figure 3: Procedure diagram for making E-Module through 3D Pageflip Professional

Figure 3 is a flow chart explaining the process of making an E-Module Practicum for Financial Administration courses using the 3D Pageflip Professional application.

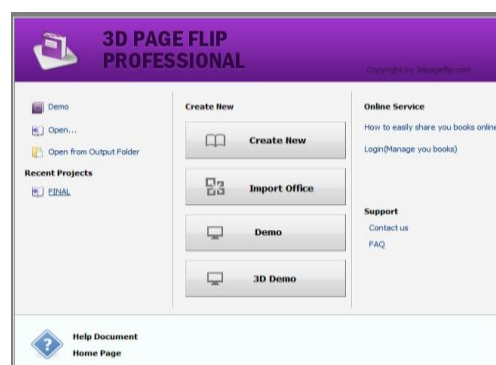


Figure 4: Initial View of the Pageflip Professional 3D Application

The first step is done by opening the 3D Pageflip Professional application program. Then, select 'Create New' to create a new E-Book.

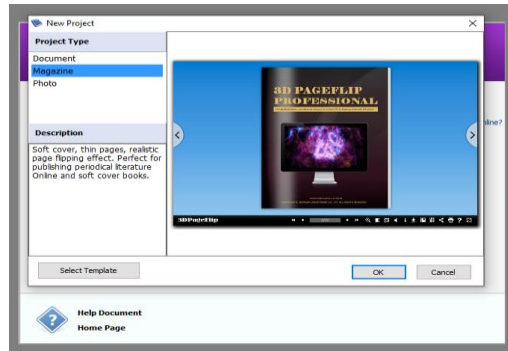


Figure 5: Project Type in 3D Pageflip Professional Application

Then, a selection of E-Book types will appear, so to create an E-Module select Project-type Magazine.

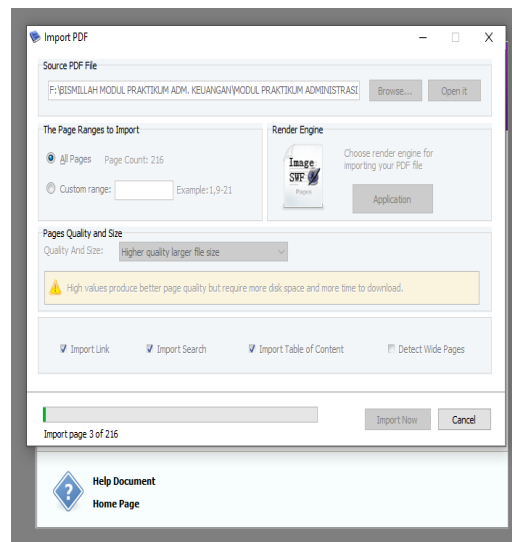


Figure 6: The process of inputting files into the 3D Pageflip Professional application

After that, select the PDF format module file in the browser. Put a check mark on the All Pages, Import Link, Import Search, Table of Content, and Detect Wide Page section. After all sections are checked, click Import Now to process inputting module files into 3D Pageflip Professional.

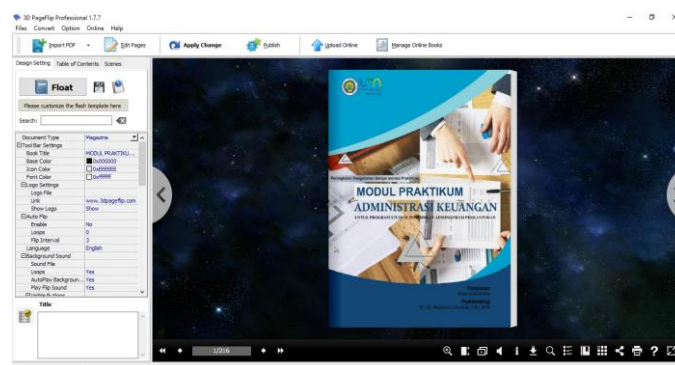


Figure7: Editing the E-Module Display

The next stage, editing the E-Module display via the Design Settings menu. Meanwhile, to create a menu select Table of Content.

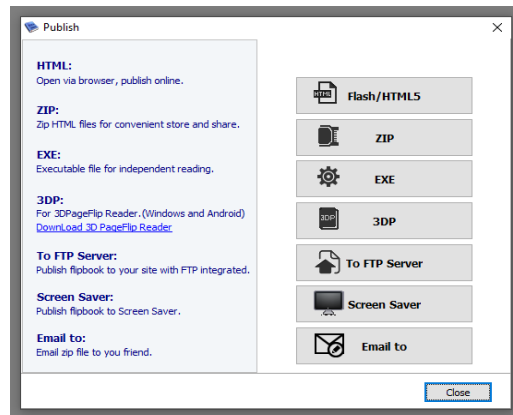


Figure 8: Publish E-Module Process

After the editing process is complete, then select Publish, select the EXE format.

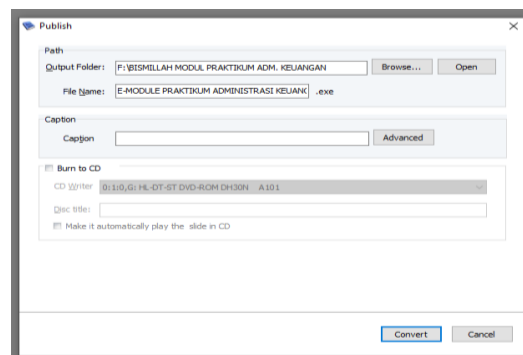


Figure 9: Convert E-Module Process

Next, Convert the E-Module to produce a Practicum E-Module.

3.2. The Development of E-Module Practicum for Financial Administration

The E-Module Practicum for Financial Administration course based on 3D Pageflip Professional has been successfully developed for undergraduate students of Office Administration Education at State University of Malang. These students are currently taking the Financial Administration course in the odd semester. They use this application via laptop or computer, offline without supporting applications.

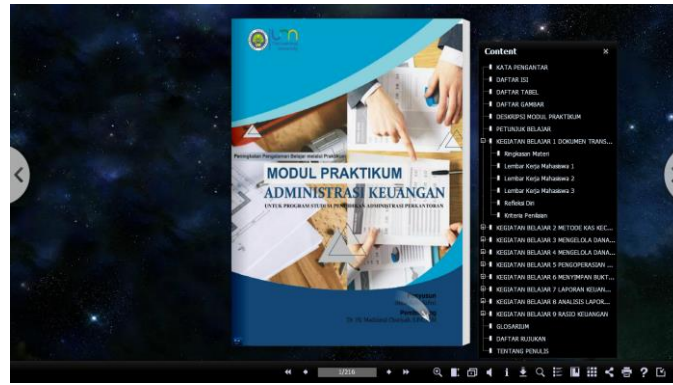


Figure 10: Display of Practicum E-Module for Financial Administration

The results of the validation of material experts, E-Module experts, limited trials and implementation of field trials, show that the E-Module Practicum for Financial Administration is "very valid". There are also criticisms and suggestions used at the product revision stage, before this product produces a very valid Final Product without revision.

Table 1: Validation and Trial Results

No	Aspect	Score				Xi	P (%)	Criteria
		X(1)	X(2)	ΣX(3)	ΣX(4)			
1.	Content Eligibility	5	-	4,66	4,67	5	95,53	Very Valid
2.	Language	4,6	-	4,81	4,63	5	93,6	Very Valid
3.	Serving	4,8	-	-	-	5	96	Very Valid
4.	Graphics	5	-	4,89	4,67	5	97,06	Very Valid
5.	Display	-	4,8	-	-	5	96	Very Valid
6.	Picture	-	4,75	-	-	5	95	Very Valid
7.	Audio	-	5	-	-	5	100	Very Valid
8.	Media	-	5	-	-	5	100	Very Valid
9.	Interest	-	-	4,81	4,69	5	95	Very Valid
Percentage (%)		97,64	98	95,39	93,42	-	96,11	Very Valid

Note:

X (1) = Material Expert Validation

X (3) = Limited User Trial

X (2) = E-Module Expert Validation

X (4) = Field Trial

Based on Table 1, it can be seen that the validators and users of the four aspects of the assessment of this application product. The aspects used are adjusted to the needs of each assessor of the E-Module Practicum for Financial Administration. The characteristics possessed by the E-Module Practicum for Financial Administration based on the 3D Pageflip Professional application program, including producing a Practicum E-Module that involves technology as well as applications, namely 3D Pageflip Professional, so that the learning process can be carried out independently. With this, the E-Module Practicum for Financial Administration can be said to be a form of quality learning and to foster motivation [18,19]. This Practicum E-Module for Financial Administration is flexible because it can be accessed anytime and anywhere offline [3]. This E-Module Practicum for Financial Administration reflects the characteristics of the module, namely “Self-Instructional”, “Self-Contained”, “Stand alone”, “Adaptive”, and “User Friendly” [20,21]. E-Module Practicum for Financial Administration is also considered as a more effective and efficient teaching material [22 -24].

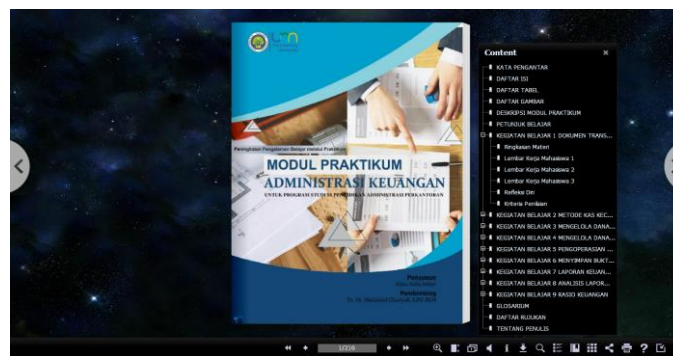


Figure 11: Front View and Navigation Buttons of Practicum E-Module

Figure 11 shows the initial screen and navigation buttons of the Practicum E-Module for Financial Administration. The content itself is the section menu button in the E-Module. The E-Module for Financial Administration Practicum is interactive and has navigation buttons, contains images, animation, audio, video, and even links and 3D effects [7,10,12,25].

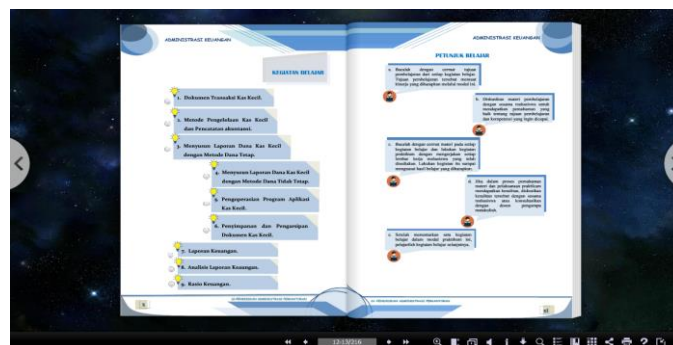


Figure 12: Menu of Learning Activities and Learning Instructions

Figure 12 is a display of the Menu for Learning Activities and Learning Instructions. The Learning Activities Menu presents nine learning activities that will be studied in the E-Module Practicum for Financial Administration. Meanwhile, the Study Guide provides instructions for learning activities to use the E-Module.

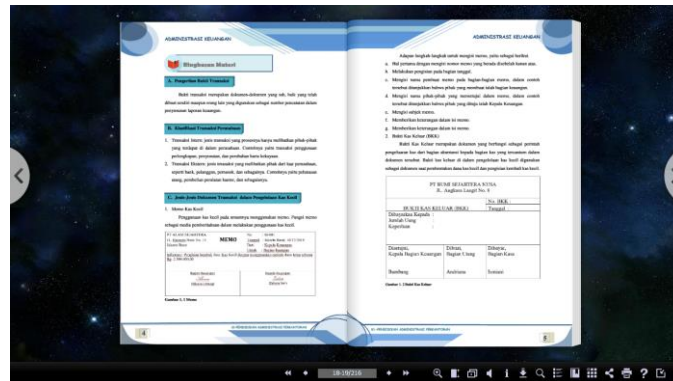


Figure 13: Summary of Materials on the E-Module Practicum for Financial Administration

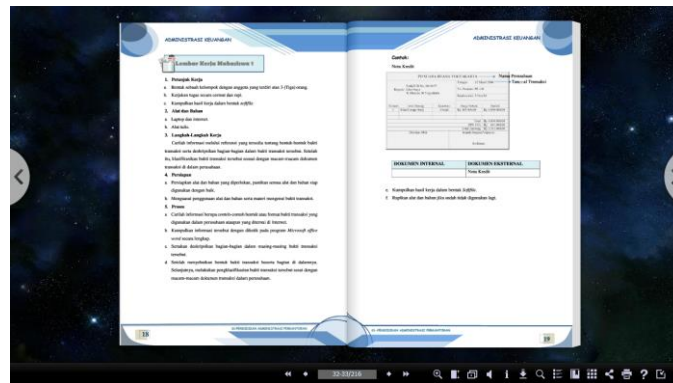


Figure 14: Student Worksheets on the E-Module Practicum

Figure 13 shows a summary of the material on the E-Module Financial Administration Practicum. Meanwhile, Figure 14 shows the Student Worksheet as a practicum activity. Modules containing practicum can increase student skill scores and also the selection of electronic practicum modules is considered more effective in improving skills than print modules [8,26,27].

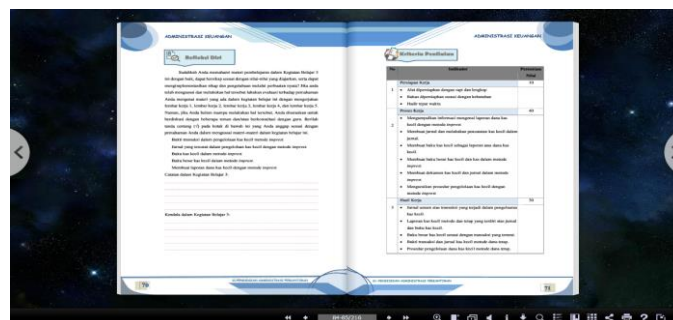


Figure 15: Self-Reflection and Assessment Criteria

Figure 15 presents Self-Reflection and Assessment Criteria as self-evaluations that students can do independently. This Practicum E-Module for Financial Administration is declared very valid as a teaching material and has characteristics. However, this product still requires further development in order to produce a higher quality product. One of the obvious shortcomings of this E-Module Financial Administration Practicum cannot be accessed via gadget.

3.3. The Effect of E-Module Practicum for Financial Administration on Self-Regulated Learning

The use of Practicum E-Module for Financial Administration shows an influence on the level of Self-regulated Learning in high category students. In limited trials as well as field trials both showed high levels of Self-Regulated Learning. There are four aspects that are assessed in Self-Regulated Learning. The learning awareness aspect has the highest score compared to the other three aspects. The following is the analysis data for the level of Self-Regulated Learning after using the E-Module Practicum for Financial Administration based on 3D Pageflip Professional.

Table 2: Level of Self-Regulated Learning in Students

Aspect	Percentage	
	Limited trial	Field trial
Independence	93,4%	91,45%
Self-management	94,5%	90,85%
Learning awareness	97,8%	94%
Solution to problem	93,3%	90,2%
Average	94,42%	91,47%
SRL Category	High	High

4. Discussion

4.1. The Effect of E-Module Practicum for Financial Administration on Self-Regulated Learning Level

The use of the E-Module Practicum for Financial Administration based on 3D Pageflip Professional as an electronic module for students can provide an increase in the value of Self-Regulated Learning, especially in practicum activities. E-Module Practicum for Financial Administration is able to encourage the value of Self-Regulated Learning because the E-Module Practicum for Financial Administration contains part of the learning process as well as self-evaluation which is carried out independently without depending on the lecturer [28]. This is because in the preparation of the E-Module Practicum for Financial Administration, it is adjusted to the Self-Regulated Learning strategy which includes goal setting, planning, self-motivation, attention control, strategy use, self-monitoring, seeking assistance, and self-evaluation [17]. After using the E-Module Practicum product for Financial Administration based on 3D Pageflip Professional, students gain self-regulated learning enhancement in four aspects, namely independence, self-management, learning awareness, and problem solving [17,29]. The use of this application increases the aspect of independence. Through this E-Module Practicum, students are able to foster responsibility through Material Summaries and Student Worksheets which encourage individuals to complete practicum activities independently. In addition, students are able to plan to analyze learning in Financial Administration through descriptions of learning activities, learning objectives, and learning outcomes so that they can help the student learning planning process. Furthermore, in the E-Module Practicum

there is also a self-evaluation process, through the Assessment Criteria Sheet and Self-Reflection. Increasing aspects of self-management are also related to the ability to manage oneself in achieving learning goals. The core part of this E-Module Practicum is a series of activities that must be followed by students, from Learning Objectives to Self-Evaluation, so that students are encouraged to be able to manage the learning process from planning to monitoring and evaluation. There is an increasing aspect of learning awareness in planning learning goals. In the Practical E-Module there is stimulation in every learning activity that motivates students so that learning awareness grows. The aspect of learning awareness is a big influence on the quality of individual learning in the learning process, especially in the current era which encourages individuals to adjust and access all information quickly [30]. Increasing the problem-solving aspect as an individual's ability to solve problems. In the E-Module Practicum for Financial Administration, there is a Student Worksheet that encourages students to complete the practicum. The aspect of Self-Regulated Learning helps students in setting academic targets, increasing perceptions of academic ability, and controlling their learning activities [13,31]. In addition, independent learning is considered important as a metacognition skill to regulate the learning process [32]. The value of Self-Regulated Learning in students is very important in order to foster self-awareness to develop students' abilities. This will shape them to become learners based on self-regulated learning as well as self-regulated learners in order to prepare themselves in the future, either as experts or professionals [33]. The value of Self-Regulated Learning is also considered relevant for creating effective learning and positive results [14,34,35]. Therefore, the E-Module Practicum for Financial Administration based on 3D Pageflip Professional is very suitable for realizing the value of student Self-Regulated Learning, as an optimal learning effort through independent learning, active learning activities, having strategic goals and learning persistence, and the ability to evaluate. learning activities carried out in accordance with the learning objectives to be achieved [36]. Providing modules that are equipped with Student Worksheets as practicum, providing great opportunities for students to choose and adjust their preferred learning patterns, and provide opportunities for them to carry out discussion activities, so that they are quite effective in increasing student learning motivation independently so that learning awareness grows [15]. Practicum module which is packaged electronically with 3D Pageflip Professional that involves technology is a form of technology-based learning that is liked by students and is able to foster student interest and encourage an independent learning process [37].

5. Conclusion

This research produces an electronic module in the form of an E-Module Practicum for Financial Administration based on 3D Pageflip Professional which aims to improve Self-Regulated Learning in undergraduate students of Office Administration Education at State University of Malang. This development product can be used through the E-Module Practicum soft file without requiring supporting applications using a computer or laptop without needing to be online. This development product has also been validated by two experts (material expert and E-Module expert), and user trials who obtained the "Very Valid" product rating category so that it is suitable for use. The use of Practicum E-Module for Financial Administration has an impact on the level of Self-regulated Learning in students. The results of using this application indicate that the level of Self-Regulated Learning in students is high after using this E-Module Practicum for Financial Administration. This Practicum E-Module for Financial Administration plays a role in increasing Self-regulated Learning in students because independence is an important provision for individuals to face and adjust to all changes that are so fast.

Acknowledgements

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