

Development of E-Module Courses Tata Boga 2 Based on Flip PDF Professional for Teaching Learning Process in The Pandemic of Covid 19

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ABSTRACT

This study aims to determine the results of the validity and practicality of e-modules made using Flip PDF Professional. The research model used was developed by Borg and Gall which consists of 10 steps but only 7 steps were adapted due to time and funding constraints. The validity test was carried out by 2 experts, namely Material and Media Experts. The results of the material expert validation assessment get a total score of 96% with a very valid category. The results of the media expert validation assessment got a total score of 88% with a very valid category. The practicality test was conducted on 10 subject lecturers and students of D4 Hospitality Management FPP UNP. The results of the practicality assessment by Lecturers get a total score of 91% with a very practical category. The results of the practicality assessment to students get a total score of 94% with a very practical category. Based on these results, it was concluded that the e-module learning media using Flip PDF Professional produced was valid and practical to be used by teachers and students in learning. This e-module is available in app format (.exe) which can be accessed offline via laptop/computer and other forms are in web format (.html) so that it can be accessed online via android and laptop, namely https://bit.ly/TataBoga2_ok

Keywords: *Development and Research, E-module, Flip PDF Professional, Course Tata Boga 2, COVID-19*

1. INTRODUCTION

The Covid-19 pandemic has changed various aspects of life, including the world of learning and education. The government has produced various policies to inhibit the spread of COVID-19, namely the implementation of distance education. Educators are required to carry out a massive migration from face-to-face education to online education. Educators are required to be able to adapt and implement innovations regarding the use of technology in the educational process [1]. The limitations of facilities and infrastructure, which have been the biggest problems and often complained by educators, can be overcome with educational innovations. Educators in learning innovation 4.0 are required to understand learning methods, apply them in the classroom, and develop them in the teaching and learning process.

All potentials and competencies that exist must be utilized in education, including the implementation and the ability and mastery of technology. With educational innovations, information and communication technology must be understood and mastered by educators. [2]

The current rapid growth of information and communication technology can be used in the teaching and learning process in education in order to increase effectiveness and efficiency in education [1]. Learning resources are used to assist lecturers in conducting education. Audio, booklets, brochures, e-books, flipcharts, games, daily, leaflets, multi-media interaction, mock-ups, e-modules, power points, videos, and website based learning (WBL) are ICT-based learning resources that can support Education [8]. Educational materials are very useful for

generating will and creating motivation for students in the education process [4]. The use of technology in education is expected to have a positive effect, according to [9] asserting that the use of technology in education can improve learning outcomes in education, the effectiveness of teaching, and can influence what and how it should be [3] knowledge and knowledge but must provide opportunities for students to master and understand concepts and principles through exploration and investigation, patterns, relationships assisted by technology in the teaching and learning process. Innovative educational media as an object, practice, or media that is considered new can provide variety, innovation or color in the educational process, this can link students actively and students get a description of learning materials and get optimal and improved learning outcomes. [2]

Changes in learning produce innovations in education aimed at improving the quality of learning. Information technology, a kind of innovation, is a necessity for learning.

Using multimedia applications in education will be more fun, innovative, and creative [7]. During the industrial revolution 4.0 and 21st century education, many materials were raised in the form of electronic materials or e-modules [5], so that the selection of multimedia as an educational medium is very fitting to try. The reality is that lecturers still use conventional and boring educational media for students because they still practice educational media in the form of word, pdf and ppt in written form [6].

One method to overcome the difficulties of students in pursuing Catering 2, especially during the COVID-19 pandemic is to innovate teaching materials using e-modules. E-module is material in the form of soft files that can be opened and read by students anywhere and anytime. [2]. Multimedia allows it to be equipped with educational goals, material presentation, and up to the evaluation and project stages. The advantage of this e-module media is that it can be accessed through various media, both laptops and android phones and students learn from anywhere and anytime. [3][5]. Based on the results of interviews with lecturers in the culinary arts subject, students are not only required to be competent in their knowledge but also expertise in cooking practices. In the teaching and learning process, previously, the material contained in printed form was used, but in explaining the use, working principle, and application, it required demonstration procedures. Another case is the limited time in delivering the module so that it is less than optimal,

especially by using non-interactive demonstration procedures that cause students to lack mastery of the module being informed. So we need more interesting and innovative learning resources that can explain the use, working principles, and their applications in accordance with 21st century education and the industrial revolution 4.0. The solution that can be offered is to increase learning resources in the form of catering materials 2 Based on Flip Pdf. The Flip PDF Professional application has more advantages, it is easy to use because it can be operated for newcomers who do not know the HTML programming language [4]. Flip PDF Professional is a feature-rich flipbook builder that is useful for page editing [6]. This application can create interactive module pages by including multimedia such as photos, videos from YouTube, MP4, audio videos, hyperlinks, quizzes, flash, and others [6]. Flip pdf has design templates and features such as backgrounds, control buttons, navigation bars, and back sounds. Students can read by feeling like opening a novel physically because there is an animation effect where when changing parks it will look like opening a novel physically [11+]. Flip pdf results can be placed in html, exe, app, and fbr formats. The Flip PDF Professional application can create interesting interactive educational media that is not only focused on writing but can also be included in motion animation, video, and audio so that education is not monotonous [12]

2. METHOD

The development of learning media in the form of e-modules uses research and development methods. Research and development is a research method with the aim of producing certain products and testing the effectiveness of these products.

In this study using an R&D research design in accordance with the opinion of Borg & Gall in



Sugiyono [13].

Figure 1 Research and Development Methods from Borg and Gall

The research implementation using Borg & Gall development procedures as many as 10 stages has been adopted only until the 7th stage, namely the Product Revision stage. Simplification and limitation of ten steps to seven steps due to limited manpower, funds, and time as well as professional flip pdf learning media are not commercialized learning media [14]. The research subjects in this study were 2 validators, namely material expert validators and media expert validators, each of which was a lecturer in FT UNP UNP and for the practicality test, it was given to a Lecturer of Catering Subjects. 2 Lecturers of FPP UNP and in the limited test to 10 students. The data to be collected in the study consists of two data, namely quantitative data and qualitative data obtained from the results of the validator's assessment and the practicality test with an instrument in the form of a questionnaire.

Giving the value of validity and practicality with the formula:

$$NP = \frac{R}{SM} \times 100$$

Information:

NP = Percent value sought or expected

R = Raw score obtained

SM = Ideal Maximum Score

100 = Fixed Number

Giving value to the validity of this learning media with the following criteria.

Table 1. Category of learning media validation

No	Achievement Level (%)	Validity Level
1.	0%-20%	Very Invalid
2.	21%-40%	inValid
3.	41%-60%	Quite Valid
4.	61%-80%	Valid
5.	81%-100%	Sangat Valid

Source: Riduwan (2011) [15]

The practicality test stage was carried out on the Lecturer of the Catering 2 Subject and the test was limited to 10 students using the following practicality category assessment.

Table 2. Categories of learning media practicality

No	Achievement Level (%)	Practicality Level
1.	0%-54%	Not Practical
2.	55%-59%	Less Practical
3.	60%-75%	Practical enough
4.	76%-85%	Practical

5.	86%-100%	Very Practical
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Source: Riduwan (2011) [15]

3. RESULT AND DISCUSSION

The results of the research on the development of learning media include the results of product validation and the results of practicality tests on e-module learning media with the Flip PDF Professional application in the culinary arts subject 2. Presentation of data obtained from the results of media validation by material expert validators and media experts before being used for practicality testing to subject lecturers and the test is limited to 10 students. Lecturer responses and student responses are needed as instruments in research and development of e-module learning media.



At the product design stage, an e-module is designed according to the observations and information that has been obtained. The e-module was developed using the Microsoft Office Word 2019 application for material preparation, to create cover pages as well as headers and footers using the Coreldraw X7 application, then converted into a PDF file. Editing learning videos using the Wondershare Filmora 9 application, and for making competency tests as evaluation materials using the Kahoot application.

The e-module product is developed in 2 formats, namely in offline format (.exe) and online format (.html). The cover display contains the identity/title of the learning module to provide information about the overall description of the content of the learning module. The cover page of the e-module is divided into 2, namely the first page and the last page. The cover page display for the e-module can be seen in Figure 2

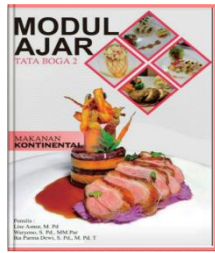


Figure 2 Front cover page view

The introductory page contains a description that explains an overview of the contents of the e-module discussion, Description of Prerequisites, Instructions for Use of the Module, Final Objectives, and Competencies. The introductory page display on the e-module can be seen in Figure 3.



Figure 3 Introductory page display

On page view CHAPTER II. Learning. Learning consists of student learning plans, and learning activities. CHAPTER II page display. Learning in e-modules can be seen in Figure 4.



Figure 4 Display of material identity and basic competencies

On the page display, the learning materials consist of the theory of basic competencies that are explained, namely learning achievements, indicators of competency achievement, main points of material, and material descriptions from 1 to 14 and videos supporting learning materials. The display of the learning material page can be seen in Figure 5.



Figure 5 Display of Learning Material Pages

In the student evaluation page, it is expected that educators can provide an assessment of the e-modules that have been done by students. The evaluation page display can be seen in Figure 6



Figure 6 Evaluation Page Display

The results of the validation of the e-module learning media on the material for catering 2. have been processed and used as an assessment in the form of a percentage diagram. The results of the assessment by material expert validators in each aspect of the assessment can be seen in Figure 7.



Figure 7 Diagram of Material Expert Assessment Results

From Figure 7 it can be seen the results of the assessment of the material from several aspects: the format aspect gets a percentage of 100%, the content aspect gets a percentage of 96% and the language aspect gets a percentage of 90%. If assessed as a whole, then the e-module gets a score of 96%. These results are then converted using a data conversion reference for validity assessment criteria, then the material in the e-module can be categorized in the Very Valid criteria.

The results of the assessment by media expert validators in each aspect of the assessment can be seen in Figure 8.

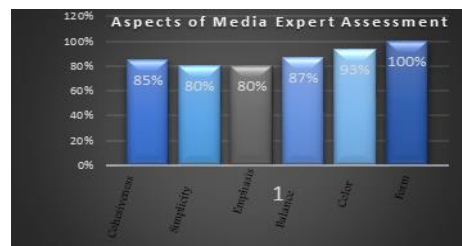


Figure 8 Diagram of Media Expert Assessment Results

From Figure 8, it can be seen the results of the assessment of the media from several aspects: the integration aspect gets a percentage of 85%, the Simplicity aspect gets a percentage of 80%, the emphasis aspect gets a percentage of 80%, the balance aspect gets a percentage of 87%, the color aspect gets a percentage of 93% and the Shape aspect get 100% percentage. If assessed as a whole, the e-module gets a score of 88%. The results of the practicality test assessment by subject lecturers in each aspect of the assessment can be seen in Figure 9.

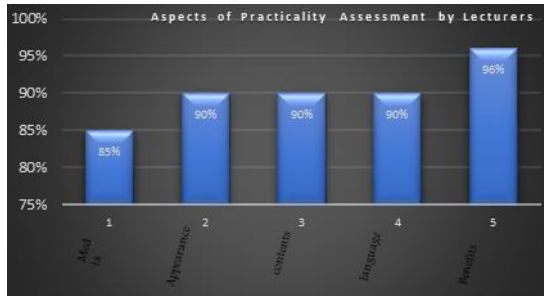


Figure 9 Diagram of Practicality Assessment Results by Lecturers

From Figure 10, it can be seen that the results of the practicality test are assessed from several aspects: the media aspect gets a percentage of 85%, the display aspect gets a percentage of 90%, the content aspect gets a percentage of 90%, the language aspect gets a percentage of 90% and the usability aspect gets a percentage of 96%. If assessed as a whole, then the e-module gets a score of 91%. The results are then converted using a data conversion reference for practicality assessment criteria, then the material in the e-module can be categorized in the Very Practical criteria.

The results of the practicality test assessment in the limited test to 10 students in each aspect can be seen in Figure 10.

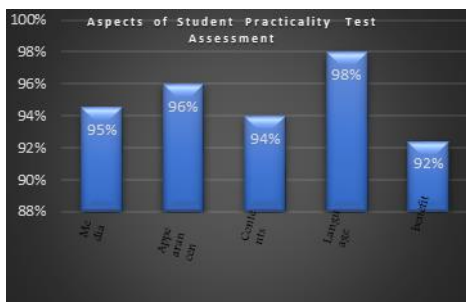


Figure 10 Diagram of practicality assessment results by students

From the diagram above, it can be seen that the results of the practicality test are assessed from several aspects: the media aspect gets a percentage of

95%, the display aspect gets a percentage of 96%, the content aspect gets a percentage of 94%, the language aspect gets a percentage of 98% and the usability aspect gets a percentage of 92%. If assessed as a whole, then the e-module gets a score of 94%. The results are then converted using a data conversion reference for practicality assessment criteria, then the material in the e-module can be categorized in the Very Practical criteria.

4. CONCLUSION

Learning media is the main component that is very influential in teaching and learning activities, especially in pandemic conditions that make the learning system implemented remotely (online). For this reason, the development of e-module learning media to be able to meet the needs of students to learn independently from home is very necessary.

This research produced a product in the form of an e-learning module for the subject of catering 2 in the form of online learning media. The process of developing this e-learning module was developed referring to the research and development development model developed by Borg and Gall which was adopted in 7 stages. This e-module is available in app format (.exe) which can be accessed offline via laptop/computer and other forms are in web format (.html) so that it can be accessed online via android and laptop, namely https://bit.ly/TataBoga2_ok.

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