

# E-Module Flipbook Model for Designing E-Learning Materials in Higher Education

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## ABSTRACT

Learning in higher education must continue amid the Covid-19 pandemic. Face-to-face learning method is no longer applied to decrease the spreading of the corona virus. The government is suggesting that the system be transformed into emergency distance learning. That includes e-learning methods in addition to face-to-face learning. E-learning is known as a common learning support facility in universities. To increase student interest in learning through e learning, there is an influence to be more innovative. The flipbook model e-module is designed to make learning more interactive. This study adopts a research & development approach, with the aim of producing e-modules as a substitute for e-learning teaching materials in higher education. The results showed that an e-module has been produced which is designed to answer problems related to the presentation of e-learning teaching materials in higher education. This e-module is in accordance with the characteristics of e-learning and students are interested to learn e learning materials which are presented in the form of e-modules.

**Keywords:** *E-Learning, Teaching Material, E-Module, Flipbook*

## 1. INTRODUCTION

COVID-19 had changed some part of every systems in every countries includes education system [1], [2]. The step to reduce viruses spreading is to make social accumulation activities to be no longer right now [3]. We can see, educational world is identically with got to be assembly in the classes or somewhere else to do learning and teaching done by between students and teachers. Nowadays, it have been worrying about the youth generations would be damaged by viruses if face to face learning system still keep going on because our mission are protect and educate the youth generations who is going on study.

To keep education activities to be going on, the alternative system could be applied unriskly. That is long distance learning [4], [5]. Specificaly for lecturing activities in higher education. Fortunately, in this era which supports those proces is keep going throught social network or specific application network for it. Students can do interaction with lectures easily. However, there is some problem. Is that method effective path of learning activities as same as direct learning in the classes? Some problem we could find are (1) time limitation of learning activities, students being unsatisfied, (2) effectiveless than direct learning, (3) and diffrenent way than usual.

Some others common problems we could find [6]: (1) some learner's resides in rural area, technological

facilities is not suport (2) lack of adequate infrastructure for implementing digital learning (3) suddently change the minset of learner must to adopt new habit in learning throught digital way (4) lack of aproprate faculty learner ratio that provide some digital learning way (5) access to technology depent on personal ability (6) Prepared for delivery, services of online learning supported by educators in unversites or colleges.

Now, we are foccused into learning services for students that come from higher education. We are looking for new method to overcome of distance learning to be more effective. If only face to face learning throught network is not enough considerly because there is a must to facilitate more. Lecturers should give other facilities as learning supports with combining of face to face online, e-learning, and giving tasks or tests throught network etc, all of them generally called blended learning [7].

E-learning have been populared as one of learning support facillities in higher education that is gotten at out of courses time. Demetriadis & Adreas explain that e-learning is flexible method but keep controlled by lecturers. Students can study and having knowleage everywhere and everytime [8]. In an e-learning, lecturers take include everything that could support their lecturing, whatever those are actual, explorative, and alculturated depend on their way to teach [9]. The main components that may be could not be spreaded throught

face to face online learning, but it can be uploaded through e-learning, for example course module, tasks, tests, games, assesment, etc.

Course modules are uploaded to e-learning called e-module [10], [11]. The purpose to increase student's interested to learn and interact with lecturers at network thought, there is an effort to make unusual module. That is e-module flipbook model. However, flipbook model e-module is rare applied for e-learning in higher education. Therefore, there is a necessary to design the e-learning module in flipbook model but still adaptate with learning demand and based on higher education standart.

It is not easy to create flipbook e-module suitable with some courses. However, the some precious related researches have proved it in some multidiscipline knowledge. As the principle, flippbook model is a frame or medium to share informations. It's purpose to increase students ability in interesting with interaction and learning. For educator, it is necessary in adding more facility based on e-learning that actual, explorative, and acculturated. Therefore, flipbook model e-module could be applied in some multidiscipline knowledge. The application of flipbook for some courses based on nearly of it's courses components.

**2. METHODS**

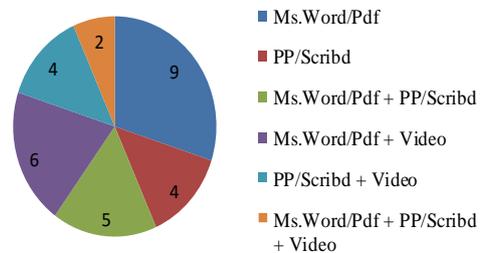
This study aims to produce an electronic module that is used in the implementation of e-learning in higher education. The research model used is research and development by adopting the stages of Borg & Gall namely: (a) information collecting, (b) planning, (c) develop preliminary form of product, (d) preliminary field testing, (e) main product revision, (f) main field testing, (g) operational product revision, (h) operational field testing, (i) final product revision, and (j) dissemination & implementation [12]. However, in this article we only describe the findings at the stages (a) information collecting, (b) planning, and (c) developing a preliminary form of product.

The research was conducted in the Department of Elementary School Teacher Education, Universitas Negeri Padang in July – October 2020. We interviewed 30 lecturers to obtain information about the implementation of e-learning and the types of learning materials provided to students. In addition, we also analyze the opinions of 120 students regarding learning materials that are distributed by lecturers on the e-learning website. The interview result and analysis are used to determine the appropriate form of learning material for the implementation of e-learning in higher education.

**3. RESULT & DISCUSSION**

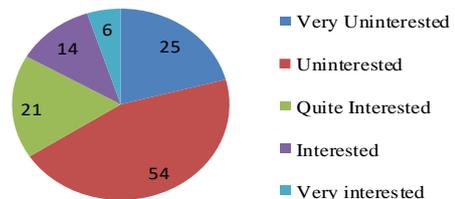
**3.1 Information Collecting**

We have interviewed 30 lecturers in the department of Primary School Teacher Education, Padang State University to get information about the form of presenting teaching material on e-learning. Some lecturers present teaching materials in Ms.word or pdf form and attach them to e-learning. Several other lecturers were creative by presenting teaching materials in the form of Powerpoint (PP) or Scribd. Meanwhile, the rest combines the two types of media or collaborates with the use of video, either made by yourself or downloaded from YouTube. The data on the presentation of the teaching material can be seen in figure 1.



**Figure 1.** Data of teaching material presentation on e-learning

Regarding the presentation of teaching materials by lecturers on e-learning, we have asked the opinions of 120 students to get information on whether they are enthusiastic about the teaching material or not. In collecting these opinions, we use a Likert scale of 1 - 5 with the following conditions: 5 (very interested), (4) interested, (3) quite interested, (2) not interested, (1) very not interested. When choosing one of these options, we ask students to include a logical reason. The results of the student opinion survey can be seen in figure 2.



**Figure 2.** Data of student opinions on teaching material presentation

Based on the data in Figure 3, it can be concluded that 79 out of 120 students (65.83%) are not interested in the appearance or presentation of teaching materials in e-learning. From the arguments presented, we summarize two main reasons, namely: (1) Generally, teaching materials are presented in word or pdf form. It is very difficult to understand material that is only described in sentences and paragraphs. (2) Teaching materials presented in various media (for example, ms.word / pdf + PP / Sribd + video) must be opened alternately. After read the material presented in ms. word/pdf form, students must move down to read the material presented in the form of PPT / Scribd and video. This is of course very ineffective because it is very time consuming and costly on the internet.

**3.2 Planning**

Referring to the problems that have been described, where most students are not interested in the presentation of teaching material in e-learning. So we provide a solution, namely by designing lecture teaching materials in the form of an electronic module (e-module).

The e-module structure developed consists of: (1) e-module cover, (2) preface and thank you, (3) table of contents, (4) profile of the developer team/writer, (5) profile of courses, (6) instructions of using modules, (7) learning outcomes for each subject, (8) material descriptions for each subject, (9) references for each subject, and (10) midterm & last semester evaluation

In order to make the e-module display attached to the e-learning more attractive, the e-module was designed in the form of a *flipbook* using the *book creator* application. The e-module display in the form of a *flipbook* will make the e-module look like a book consisting of sheets of material [13]. Students can open each e-module sheet as if opening a book in real form (see figure 3). The use of the book creator application is because this application is intended for e-module creation. Book creators can combine various types of media on each sheet of e-module material, such as pictures, pdf, powerpoint, video, hyperlinks, barcodes, and voice notes.

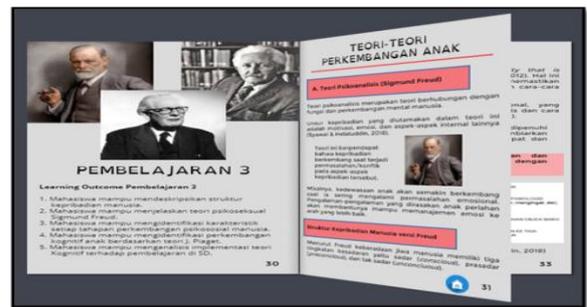


Figure 3. Display of the e-module flipbook model

**3.3 Develop preliminary form of product**

Based on the plans that have been prepared, format of the e-module is designed according to the structure and other components that have been determined. The designed e-module components are described as follows.

**E-Module Cover**

Cover is the beginning part of the module structure. Cover is a module interpretation that describes the contents of the module as a whole. Therefore, the cover must be designed proportionally and have an attractive appearance.

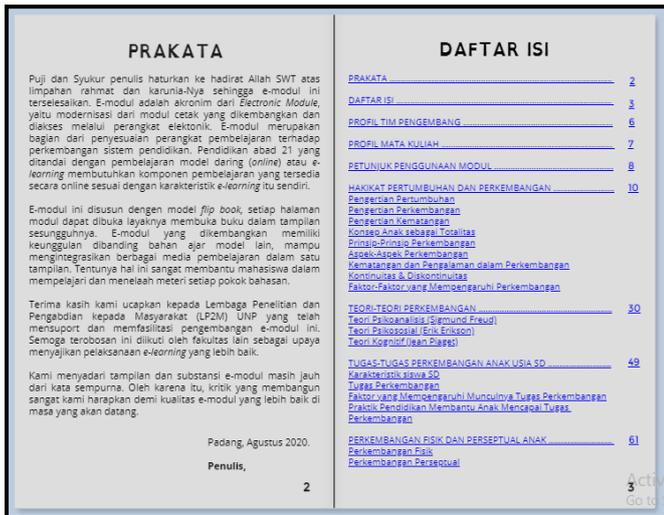
The *book creator* application is not intended for cover design. So that the e-module cover is made using the *Canva* application. You must subscribe to this application so that the cover that has been designed does not have a watermark. The canva application provides various cover layout sizes as needed and various types of images without copyright. You can adjust the color, insert text and images on the selected layout then arrange it to produce an attractive cover. The cover design can be seen in figure 4.



Figure 4. Design of e-module cover

**Preface**

The preface contains a brief description, development objectives, and the advantages of the e-module being developed. The preface also contains a thank you to the parties involved in the e-module development process. The foreword design can be seen in figure 5.



**Figure 5.** Design of e-module cover

**List of content**

The table of contents contains a list of the subjects contained in the e-module. The table of contents aims to facilitate the search for the desired material/subject matter. The list of subjects in the table of contents is made in the form of a hyperlink. By clicking on the desired language principal list, it will automatically be directed to the list page. The table of contents design can be seen in figure 5.

**Developer team profile/writer**

Developer team profile a brief description of the identity of the e-module compiler. Through this information, readers can stand on their own. This section is equipped with a contact officer, readers can contact the author for more information. The developer team profile can be seen in figure 6.

**Course profile.**

The course profile is a short description of the courses being taught, consisting of the name and code of the course, the supervisor, and the implementation model. This section can also contain overall course learning outcomes. The developer course profile can be seen in figure 6.



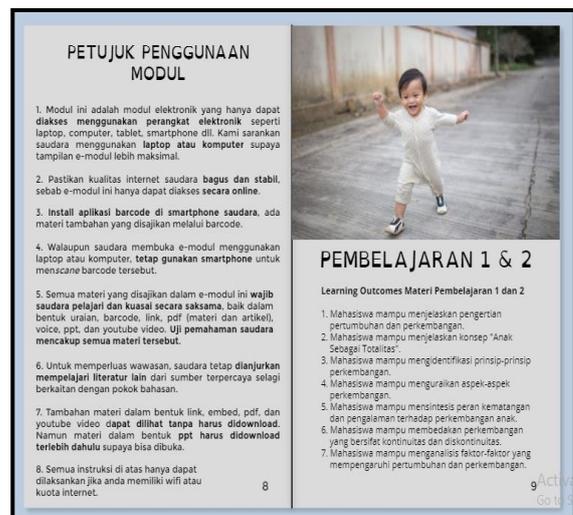
**Figure 6.** Design of developer team profile and course profile

**Instructions of using modules**

The instruction of using modules contains a description of the procedure for using the e-module as well as information about the devices that must be prepared in order to access the e-module. Design of instructions part can be seen in figure 7.

**Learning outcomes for each subject**

In addition to having course learning outcomes which are the overall course achievements, the module/e-module also contains learning outcomes for each subject. Learning outcomes are certainly more specific because they only refer to one material focus. Design of learning outcomes for each subject can be seen in figure 7.



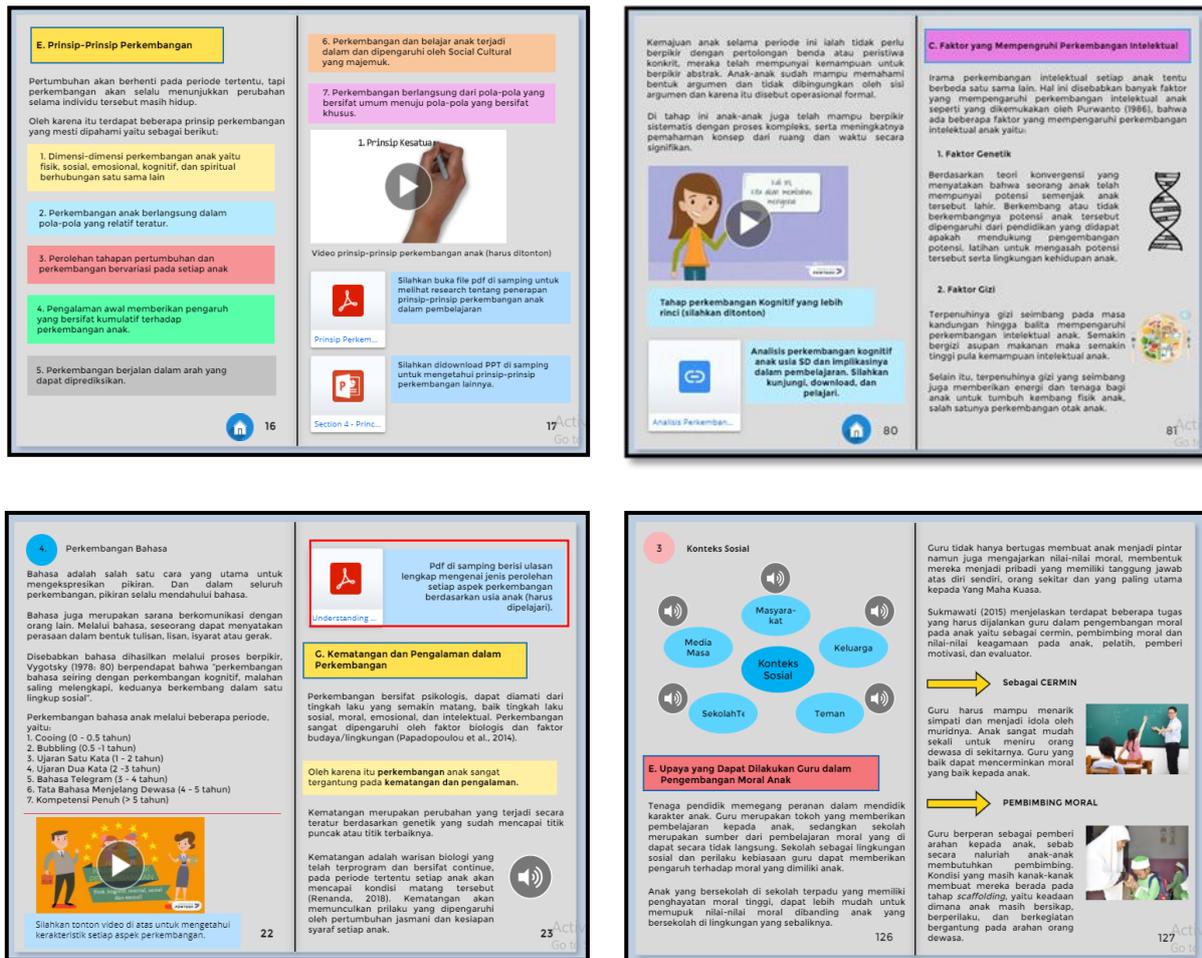
**Figure 7.** Design of instructions in using modules and learning outcomes for each subject

**Material descriptions for each subject**

Material description is one of the main elements in a module. This material description is a complete explanation of each subject in the module. The material descriptions are grouped based on the main points of the module material. In the e-module that we have developed, the subject is termed "lesson". There are 12 lessons in the e-module that we have developed,

meaning that to complete this e-module, students must learn the 12 subjects / subjects in it.

In accordance with the previous explanation, the e-module that we designed in the form of a flipbook has the advantage of being able to combine several types of media in one view to support the material presented. The design of the material description can be seen in the following figure.



**Figure 8.** Design of material descriptions for each subject

**References for each subject**

The material description in e-module has clear and accountable sources. This shows that the material presented is not a mere narrative. The material presented is also not plagiarism, but is our thoughts which are adapted and supported by several relevant and trusted sources.

We deliberately appear references on each subject matter. This aims to make it easier for students to find

information from every statement we quote. Our reference sources can be in the form of books or articles in journals

**Midterm & final semester exam**

To find out the level of students' understanding of the material presented in the e-module, we provide two assessments, namely the midterm and final semester exams. The results obtained in the midterm exam will be

used as evaluation material for the next mid-semester learning.

## Discussion

Since it was implemented in 2014, online learning (e-learning) in higher education has only been implemented in certain situations and conditions. However, now the Covid-19 pandemic has forced the learning system in higher education to be completely shifted to online (e-learning). In its implementation, several problems were found, especially related to the presentation of teaching material in e-learning. Teaching material is one of the components that affect the success of learning [14] and is the main element that must be in place for learning to take place.

According to the opinion of students of the PGSD FIP UNP Department, most of the courses have unattractive presentation of teaching materials. They admit that access to e-learning is only for filling attendance, not studying the material provided. Even though they downloaded the material, they didn't study it at all. This is of course natural, because the teaching material will be the basis for interaction in learning. The attractiveness of the design of teaching materials will excite the enthusiasm for learning [15], [16].

E-Module is indeed the most appropriate choice in packaging online learning teaching materials [17]. Wahidah et al [18] explain as a teaching material for online learning, e-module has several advantages, namely: (1) Easy to control or operate according to the reader's wishes, (2) Equipped with various media such as voice notes, videos, slide shows/powerpoints, pdf & ms.word files, pictures and hyperlinks. (3) The e-module design can be presented in the form of a flipbook, so that it is as if opening a book in real form. (4) Can be attached or uploaded to the university's e-learning website, and can also be linked to various quiz applications, (5) E-module can be opened on computers & mobile phones, so that users can study as desired, (6) This product can used as a learning resource for students who want to learn without time restrictions.

## 4. CONCLUSION

Based on the results, it can be concluded that the initial form of the e-module that has been produced is a substitute for the design of the teaching materials attached to e-learning.

The initial form of the e-module was developed based on the problems in the field, namely the presentation of teaching material in e-learning that was not attractive and was not integrated. This means that with this product, it can be seen what kind of material design is most suitable for the context of e-learning and online lecture systems in universities at this time.

The e-module carries the concept of integrated teaching materials, namely combining several types of media in presenting material. Students can learn more independently and also more effectively even though only through the e-learning website. The support of various media will allow students to understand each subject matter easily.

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