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DESIGN OF FASHION-BASED TEACHING BOOKS INTERACTIVE E-BOOK IN THE LEARNING ERA BLENDED LEARNING

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Abstract

Learning that takes place in the Fashion Design Education Study Program is of course related to practical learning in the field of fashion. In the practicum learning process, students need a high level of understanding to carry out every step of making a dress. Learning that is regulated by blended learning has various obstacles including; restrictions on the number of practicum classes in class, different levels of student understanding, mastery of sewing skills that are not the same, inadequate learning tools and also internet network disturbances during online learning. This study aims to design interactive e-books to support blended learning. An e-book is a book that is programmed into a computer so that it can visualize abstract material into a visual form that can be animated so that students are more interested in the learning process. The development of interactive e-book media uses a 4-D development model through 4 stages, namely the Define stage, the Design stage, the Development stage and the Disseminate stage. Data collection techniques using questionnaires and observation sheets. The results showed that the average practicality test results were in the practical category and the effectiveness test was in the good category.

Keywords: *E-book, Basic Fashion, Blended Learning*

A. Introduction

The development of science and technology has had a huge impact on the world of education. At present and certainly in the future, the implementation and ongoing learning process cannot escape the impact of technological developments. The use of various electronic media in the learning process is an option especially in the implementation of blended learning. Blended learning is one of the conveniences in learning that combines various ways of delivery, teaching models and learning styles, as well as introducing various dialogue media options between the facilitator and the person receiving the instruction.

Educational goals will be achieved by cultivating the right strategy where the components of the learning process include materials, methods, facilities and infrastructure and evaluation need to be given proper attention. In addition, learning resources are needed that support the learning process including support systems, materials, and the learning environment. With the existence of teaching materials, it can help educators in implementing learning activities and students obtain convenience in learning every competency that must be mastered.

To develop learning media by utilizing computer technology, it strongly supports the creation of learning media that contains multimedia-based images, sounds and writing (Fathoni and Marpanaji 2018). One of the media that can represent multimedia-based learning media is interactive e-books. As stated by (Nur'aini, Fadiawati, and Tania 2015) E-books can be used as interactive learning resources, because they can integrate images, sounds, movie animations, and interactive evaluation questions, resulting in direct interaction between students and learning resources.

Observations made in the Fashion Design Education Study Program in the Basic Clothing course found several obstacles, namely: In the learning process for making clothing practicums, students need a high level of understanding in understanding each step of sewing clothes in the Basic Clothing Course. This course also equips students with basic theoretical material in the field of fashion, such as: the role of clothing in everyday life, fashion terms from A to Z, dress ethics, dress aesthetics, basic fashion design concepts, changing models according to the chosen design, designing materials and prices, techniques for cutting materials, correct ironing techniques, sewing techniques according to procedures/steps, fitting, finishing and packaging.

Another obstacle is the limited practicum time and the capacity of the room which is regulated according to the provisions of face-to-face learning and also learning facilities

which are felt to be lacking in the learning process. Whereas in online learning, the obstacle that students often face is the lack of support for the learning tools used by students. In addition, internet network disturbances still often occur during lectures, so that not all lecture material delivered by lecturers can be absorbed properly by students.

As stated by (Afiffah and Musik 2022) there are many factors of difficulty in distance learning, one of which is being unable to convey material directly. With distance learning, teachers need to make good use of information technology. Teachers are required to innovate with new learning models. In addition to this, educators can take advantage of learning by using the media. The existence of learning media can make it easier for students when understanding the ongoing lesson.

According to (Asmara 2015) in (Asmara 2015) states that learning media can overcome various obstacles that arise including; communication barriers, students' passive attitudes, student observations that are not uniform, the nature of learning objects that are less specific so that it is not possible to study without media, and remote learning places. Meanwhile, lecturers as educators must be able to create a learning environment by utilizing technology, looking for loopholes so that learning becomes interesting, fun, and not monotonous (Lestari, P, and Fujiawati 2021).

To resolve the obstacles mentioned above, it is felt that there is a need for a new breakthrough to deliver lecture material so that students can study independently and study time is more flexible by utilizing technological developments to design multimedia-based learning media. One of the developments in multimedia is an interactively designed e-book. The advantages contained in e-books make users start to switch to using e-books instead of using conventional books (Hasyim et al. 2014). Furthermore (Sanuaka, Ariawan, and Sutaya 2017) argues that the advantages of e-books can be used anywhere, anytime and used by anyone. Readers can access e-books online or offline.

Learning media is a tool to strengthen the teaching and learning process. Based on the results of the research that has been done, it shows that increasing student learning outcomes can be supported by the use of multimedia in learning (Billfath 2022). Delivery of material requires a tool that can make learning more comfortable and not burden students.

The concept of interactive on the E-book refers to the interaction between the user and the E-book which allows users to run and manipulate various forms of media, such as text, sound, video, computer graphics, and animation. The interaction between the user and the E-book in question is: (1) there is feedback when the user answers the

questions; (2) users can run video, audio and animation, as well as various other tools. The choice of e-book media designs as stated by (Maulida, Adnyana, and Bestari 2022) is because the presentation involves multimedia, is practical and easy to distribute to students, besides that students can use it without being limited by space and time.

Referring to the explanation above, researchers focus on solving problems based on the root causes of learning media. Therefore, the idea of solving the problem in this case is "Designing Interactive E-Book-Based Textbooks in the Blended Learning Era". With the idea of solving this problem, it becomes a supporting reference in the basic learning process of clothing that can be used independently by students in blended learning.

B. Methods

1. Research Model

The research was conducted using a research and development model (Research and Development). The model used is 4D, this model was chosen because it has a systematic development stage and is in accordance with the product to be developed. 4D has 4 stages namely; Define, Design, Develop and Dissemination. This model was put forward by Thiagarajan, Dorothy S. Semmel and Melvyn I. Semmel (Thiagarajan & Sivasailan, 1976) in (Fitrianna, Priatna, and Dahlan 2021).

2. Research Procedure

The stages of developing interactive e-books in this study are as follows: 1) define, at the definition stage, an analysis of the SLP for the Basic Clothing Course is carried out, then determines the material to be developed for the learning media; 2) design, in this stage the preparation of an interactive e-book draft is carried out in detail and followed by the process of designing the e-book; 3) development, at this stage the aim is to develop an e-book, measure the validity and practicality of the product, and make improvements to the e-book that has been made based on input from experts and responses from students; 4) disseminate, at this stage the aim is to see the consistency of the learning media based on the trial results and product effectiveness.

Product validity is measured from the assessment of experts, namely material experts and media experts. Based on this validity measurement, suggestions for product improvement are obtained. Practicality is done by giving questionnaires to users, namely teachers and students. Effectiveness stage, this stage is focused on evaluating interactive e-book media that can be used to achieve effective goals in increasing understanding and quality of student learning.

3. Data Collection Technique

Data collection techniques and data analysis on the instruments used in this study were validity questionnaires, practicality questionnaires and observation sheets of students' psychomotor abilities in practicum activities.

4. Data Analysis Technique

Data analysis techniques in research conducted using descriptive quantitative data analysis techniques.

C. Results and Discussion

1. Defining Stage

At this stage of defining, an analysis of the Basic RPS Clothing is carried out to determine the learning material to be developed. This research develops interactive e-book-based textbooks that make it easier for students to choose the material they want to study in the basic fashion course and return directly to the table of contents page. The material developed in this textbook is theory and practice in basic fashion courses.

2. Design Stage

At this stage the author designed an interactive e-book-based textbook on the basic course of fashion. Several applications are used in designing this interactive e-book, including; Canva App, Professional Flip Book App, Youtube Media and Google Forms App. As a template for making e-books, the Canva application is used which is modified by the author by loading personally designed images, the Professional Flip Book application is used as an interactive e-book media to be able to lead users to and return to the desired page, Youtube media is used as a medium for uploading video tutorials and showing videos and the Google Form Application are used as media for practicing questions for learning evaluation.

The design stages and interactive e-book-based teaching components designed are as follows:

- 1) Collect literature from various sources, books and journals. As for images and videos that have specificity, they are dominated by images specially designed and made by the author for the developed learning media.
- 2) Creating an interactive e-book component, where the developed e-book contains a cover page, preface, table of contents, learning materials, pictures, video

tutorials, evaluation, bibliography and author's biodata. The interactive e-books that have been designed are as follows;

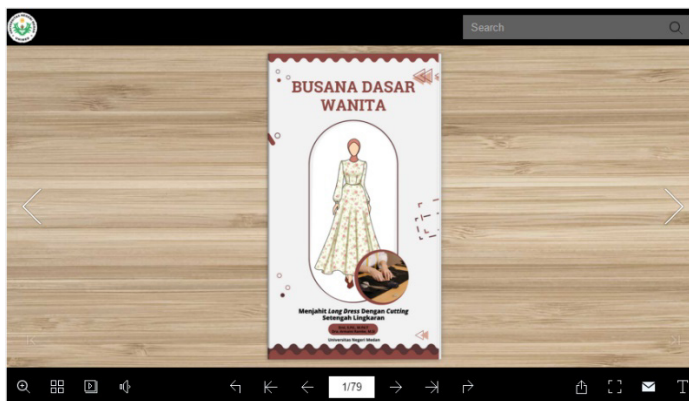


Figure 1. Display Cover on Interactive E-Book

In figure 1. Displays the main page which contains the title of the e-book and pictures of clothing and sewing techniques for women's clothing. Cover colors are dominated by cream and khaki colors.



Figure 2. Display of Preface Table of Contents

Figure 2. Displaying the preface and table of contents. The preface provides an explanation of the scope of material to be studied in an interactive e-book. This list contains material that will be studied by students according to the discussion. The table of contents also includes a voice explaining or brief instructions for using the e-book. The developed e-book contains 10 chapters. In this table of contents view students can choose which material to study. Every material that is clicked, will immediately take students to the intended page and return directly to the table of contents page as a form of designed interactive media.



Figure 3. Display of Interactive E-book Material

Figure 3. Showing the material in the order of the subject matter in the basic women's fashion course. On each page there is a table of contents, this allows students to return directly to the table of contents by clicking on the table of contents in the lower left corner as an interactive form of the media being developed. This is in line with what was stated by (Interactive, Material, and Dan 2022). The characteristics of this interactive e-book include electronic media that can be accessed using a laptop or smartphone, combining text with images, videos, hyperlinks as shortcuts to pages. certain links, and external links that link to access certain pages. For each material page is designed with a different background color.

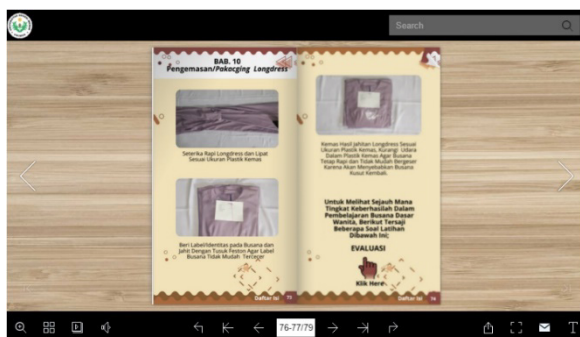


Figure 4. Display of Evaluation in Interactive E-Books

Figure 4. Displaying the evaluation page as a measuring tool for students to find out the level of mastery of the material after it has been studied. The evaluation will be connected directly to the pre-designed Google form which is then embedded in a link in the interactive e-book.



Figure 5. Display of the Interactive E-Book End Page

Figure 5. Displays the bibliography and personal data of the authors of interactive e-book media designs in fashion basic courses. The bibliography contains a list of material references in the e-book. On the final page there are the author's social media accounts in the form of Instagram, Email, Face Book and Whats App. Author media accounts allow students to interact directly with authors by clicking to access the author's social media.

3. Development Stage

The development stage is carried out by developing interactive e-book media that has been planned previously. After the product has been developed, the next step is product validation by material experts and media experts by filling out the validation questionnaire form until the resulting media is valid and feasible to be tested. Material validation was carried out by 3 experts in the fashion industry. Revisions have been made based on the assessment and suggestions given by each validator.

The practicality of using interactive e-book media is based on a practicality questionnaire given to students to see how far students respond to the interactive e-book media that has been developed. The calculations are as follows:

Table 1. Results of the Practicality Assessment of Interactive E-Book Media

Rated aspect	Practical Percentage	Category
Ease of Use	73%	Practical
The attractiveness of the dish	81%	Practical
Benefits Obtained	85%	Practical
Overall Percentage	80%	Practical

Based on the table above, the practicality assessment obtained from students shows that interactive e-book media can be used in the process of learning basic women's clothing. This is in accordance with what was stated by (Alifya and Rahman 2020) that the aspects assessed in this questionnaire include, among others: (1) Ease of use of navigation buttons in interactive E-books; (2) the clarity and suitability of the interactive materials and content contained in the E-book; and (3) interactive content such as animations, videos, and interactive questions which can be accessed in interactive E-books.

The effectiveness of interactive e-books is directed through student performance in the use of interactive e-books. Performance is assessed by using an observation sheet to observers who observe the work process of sewing women's basic clothes. The observers in this activity were two lecturers in the basic women's fashion course. The observation sheet uses a Likert scale with a score of 4 (able); score 3 (able with a little help); score 2 (able with lots of help); and score 1 (unable). The calculation is as follows;

Table 2. Performance Results of Interactive E-Book Media Effectiveness

Practice	Average	Score	Criteria
Sewing college clothes with semi-circle cutting	90	80	Good
Average	90	80	Good

Based on the performance table above, it can be concluded that overall the results of student performance on learning using interactive e-book media obtained an average of 90 with a value of 80. This indicates that when viewed from the aspect of student psychomotor learning outcomes, the effectiveness of using e-media -book interactive is in the criteria of "Good". This illustrates that interactive e-books keep learning student-centered, so that students can understand the content well. In the field of fashion, e-modules and e-books with variations of four indicators containing text, images, animations and videos that help make it easier for students to learn the field of fashion skills (Alannawa and Hidayati 2021).

4. Dissemination Stage

At the disseminate stage, the implementation of interactive e-book media is carried out which has been developed in the study of basic women's clothing and has been tested for use by others. Products that have been tested for validity, practicality and effectiveness, then these products are disseminated to lecturers who teach basic

fashion courses. second semester. Product distribution is also carried out online via Google Drive, and can be accessed online on the registered e-book page.

D. Conclusion

Based on the formulation, objectives, results and discussion of the research on the development of interactive e-book media in the fashion basic course previously described, it can be concluded that:

- a. Textbooks based on interactive e-books based on fashion have been produced which are valid and suitable for use as learning media implemented in blended learning.
- b. Practicality of the use of basic interactive e-books obtained practical criteria in the learning process. This is shown from the learning outcomes of students who are taught with interactive e-books which are higher than the learning outcomes of students who are not taught with basic interactive e-books.
- c. The effectiveness of the use of fashion-based interactive e-books is obtained as an effective category in the learning process. This can be shown from the practicum learning outcomes of students who are taught with interactive e-books which are higher than the learning outcomes of students who are not taught with basic interactive e-books.

Thus, the conclusions mentioned above generally indicate that the interactive e-book media that has been developed is valid, practical and effective for use in basic fashion courses which are implemented in blended learning.

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