

# Development of Teaching based on Interactive E-Book on Women's Basic Clothing Course

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**Abstract.** In the process of practicum lectures, a high level of understanding is needed for students in carrying out every step in the process of sewing college clothes in the Basic Women's Clothing Course. 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 teaching and learning process. Changes in the way of learning arranged in online and offline meetings require media that can support blended learning. This e-book was developed to support blended learning on the competence to make a semi-circle long dress. 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. The results of the research on the validity test by material experts and media experts obtained the "Very Valid" criteria. Based on the results of the validity, it can be concluded that the interactive e-book media in women's basic clothing courses can be said to be very valid to continue to the next stage.

**Keywords:** E-book, women's basic clothing, blended learning.

## 1 Introduction

Science and technology are growing in all aspects, including in the world of education. The implementation of ongoing learning also does not escape the impact of technological advances. The use of electronic media is an option in learning now and in the future. Learning arranged in face-to-face meetings in class and also carried out online makes the learning process take place in a blended learning manner. Blended learning is an ease of learning that combines various modes of delivery, teaching models and learning styles, as well as introducing various choices of media for dialogue between the facilitator and the person receiving the lesson.

Efforts to achieve educational goals require the right strategy by paying attention to the components of the learning implementation process such as methods, materials, facilities and infrastructure to evaluation. The presentation of attractive and interesting material by using a teaching aid can be used in the world of education as a method of learning. The use of computer technology as a means to develop learning media strongly supports the creation of a multimedia-based learning media that can present learning media that contains images, sounds and writing [1]. Mulyadi et. al. argues that audio-visual media is a type of media that contains elements of images that can be seen and heard [2]. Audio-visual media include video recordings, various sizes of films, sound slides, and so on. In the practicum lecture process, a high understanding is needed or students in understanding every step in the process of sewing college clothes in the Basic Women's Clothing Course.

Preliminary analysis conducted at the Fashion Design Education Study Program in the Women's Basic Clothing course, found several cases including: the sewing material for

women's basic clothing presented in this course is a work procedure so that high reasoning is needed by students to do the work steps of sewing women's clothing. Especially in women's college clothes with a semi-circle cutting pattern in the form of a long dress. Women's basic clothing courses study theory and practice, students are equipped with basic knowledge of women's clothing including; the role of fashion, ethics and aesthetics of dress, fashion terms, designing simple fashion concepts, developing patterns according to designs, calculating materials and prices according to designs, and making women's clothing according to occasions with the right technique.

The limited time for practicum and the limited capacity of the room as well as learning facilities are also felt to be lacking so that it often becomes an obstacle in the face-to-face learning process. Likewise in online learning, internet network disturbances often occur during lectures which cause not all students to absorb lecture material delivered by lecturers properly.

Seeing a more flexible study time, it is necessary to have a new breakthrough to deliver lecture material so that students can study independently. Submission of material requires a tool that can make learning more comfortable and does not burden students. Learning media is a tool to strengthen the teaching and learning process. Based on the results of the study, it shows that improving student learning outcomes can be supported by the use of multimedia in learning [3]. Asmara states that learning media can overcome various obstacles that arise including; communication barriers, passive student attitudes, student observations that are less uniform, the nature of learning objects that are less special so that it is not possible to study without media, and remote learning places [4].

One of the media that is widely used today is a book that is presented in electronic form or known as an Electronic Book (E-Book). E-Book is an electronic book that contains information in the form of text and images. One form of textbook is an E-book. E-books are known as digital books or electronic books, in English. The term E-book is an abbreviation of Electronic book. The initial e in the word E-book, E-learning, E-laboratory, E-education, E-library means electronics which is implicitly interpreted based on digital electronics technology. interactive E-books. The concept of interactive e-book refers to the interaction between the user and the e-book which allows the user 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 are: (1) there is feedback when the user answers the questions; (2) users can run video, audio and animation, as well as various other tools.

Referring to the explanation above, the researcher focuses on solving the case based on the root of the problem in the material. Therefore the idea of solving the case is "Development of Interactive E-Book Media in Women's Basic Clothing Course". With the idea of solving this case, it becomes a supporting reference in women's basic clothing lectures that can be used in blended learning independently by students.

## **2 Research Method**

The research conducted is research and development. The media developed in this study is an interactive e-Book by considering the diversity of student understanding in carrying out a structured work process in the practicum in the Basic Women's Clothing course. The 4D model was chosen because this model has a systematic development stage and is in accordance with the product to be developed. 4D stands for Define, Design, Develop and Dissemination, this model was proposed by Thiagarajan, Dorothy S. Semmel and Melvyn I. Semmel [5].

The stages of developing an interactive e-book in this study are as follows: 1) define. At the definition stage, an analysis of the RPS for Women's Basic Clothing is carried out, then determines the material to be developed for the learning media; 2) design, this stage is carried out by compiling an interactive e-Book draft to sew a long dress with semi-circle cutting in detail and followed by the e-Book design process; 3) at this stage the aim is to develop e-books, measure product validity and practicality, and make improvements to e-books that have been made based on input from experts and responses from students; 4) disseminate, at this stage the aim is to see the consistency of learning media based on the results of trials and product effectiveness.

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

Data collection techniques and data analysis on the instruments used in this study were questionnaires on validity, practicality and observation sheets on the ability to sew a semi-circle long dress. Validation and practicality assessments use Likert scale criteria 1-4. The percentage of the average score of the criteria is calculated by the following formula.

$$\text{Percentage} = \frac{\text{skor yang diperoleh}}{\text{skor tertinggi}} \times 100\%$$

The results obtained are interpreted using the following criteria:

- 0 - 20% = very low
- 21 - 40% = low
- 42 - 60% = currently
- 61 - 80% = high
- 81 - 100% = very high

While the results of psychomotor learning can be seen from the observations of students' practical results in sewing long dresses with semi-circle cutting. The scale used in determining the results of performance in learning activities is the rating scale as follows:

- 0% : not doing at all
- 1% - 25% : Not capable
- 26% - 50% : able to do with a lot of help
- 51% - 75% : able to do with a little help
- 76% - 100% : capable [6]

### **3 Results and Discussion**

#### **3.1 Defining Stage**

The definition stage is carried out by analyzing the Women's Basic Clothing RPS and determining the learning materials to be developed. This study develops an interactive e-book where students can choose the material that needs to be studied in the basic women's clothing course. The materials developed are; 1) the role of clothing; 2) clothing and personal personality; 3) classification of clothing for various occasions; 4) fashion terms; 5) Change the dress model; 7) designing the concept of college clothes; 8) designing materials and prices; 9) cutting materials; 10) sew a longdress; 11) finishing and packaging long dress.

### 3.2 Design Stage

Design Phase In this stage the author designs a research product in the form of an interactive e-book on women's basic clothing courses. An interactive e-book designed using several applications including Canva, Flip Book Professional, Youtube and Google Form. The Canva application is used as a template in making e-books and modified by the author, the Flip Book Professional application is used as an interactive e-book media, the Youtube application is used as a medium for showing videos and the Google Form application is used as a media for practice questions

The e-book media is designed by displaying a different color background for each material to make it look more attractive and different from e-books in general. The typeface used is Open Sans Light with sizes, 22, 25, 26, 30 and 40. Each size is adjusted to the subject and sub-topic.

- 1) Creating an interactive e-book component, where the e-book developed contains a cover page, table of contents, materials, video tutorials, practice questions, bibliography and author biodata. Learning materials are obtained from various literatures, both books and journals. Meanwhile, pictures and videos that have specificity are dominated by pictures specially designed and created by the author for the developed learning media. The descriptions of the interactive e-book parts that have been designed are as follows;
- 2) Cover
- 3) The cover on the interactive e-book displays the title of the e-book and pictures of clothing and sewing techniques for women's basic clothing. The cover color is dominated by cream and brown colors.
- 4) Preface
- 5) The preface contains the researcher's gratitude for being able to complete an interactive e-book on the basic women's clothing course.
- 6) Table of Contents
- 7) The table of contents of the material that will be studied by students. In the developed e-book there are 11 chapters. In this table of contents, students can choose which material to study. Each clicked material will immediately take students to the intended page as a form of interactive media developed.
- 8) Material
- 9) Showing the material according to the order of the subject in the basic women's clothing course.

Chapter I consists of the concept of the role of clothing in everyday life including the notion of clothing, the function of clothing, dress ethics and dress aesthetics.

Chapter 2. Discusses the relationship between clothing and personal appearance, consisting of the concept of self-appearance and personality, the relationship between clothing and personal appearance, the relationship between clothing and health, and the relationship between clothing and cleanliness.

Chapter. 3. Discuss the classification of clothing for various occasions, including home clothing, work clothing, recreational clothing, party clothing and clothing for special occasions.

Chapter. 4. Discussing terms based on the alphabet from the letters A to Z.

Chapter. 5. Discussed the preparation of the concept of fashion design for college opportunities in a simple way, including; ideas, form ideas, style ideas, detail

ideas, color ideas, material ideas, master designs, alternative designs and product ideas.

Chapter. 6. Changing the model of college clothing, including; front body pattern, back body pattern, sleeve pattern and skirt pattern.

Chapter. 7. Designing materials and prices for women's basic clothing for college opportunities.

Chapter. 8. Cut the basic materials for women's clothing for college opportunities.

Chapter. 9. Sewing basic women's clothing for college opportunities, including; seam the edges, sew the sides of the body, join the waist, sew the zippers, sew the shoulders, sew the fronts, sew the sides of the sleeves and attach the sleeves.

Chapter. 10. Women's basic clothing fittings and finishing for college occasions.

Chapter. 11. Women's basic clothing packaging for college opportunities

Each page of the interactive e-book contains a table of contents which allows students to return to the table of contents directly by clicking on the table of contents in the lower left corner as an interactive form of the developed media. This is in line with what was stated by [7]. The characteristics possessed by 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 certain pages, and external links that linked to access a specific page.

### 3.3 Development Stage

The development stage is the development of interactive e-book media that has been previously planned. After the product has been developed, the next step is product validation by material experts and media experts by filling out a validation questionnaire until the resulting media is valid and feasible to be tested. Material validation was carried out by 3 experts in the field of fashion. Revisions have been made based on the assessments and suggestions given by each validator. The following are the results of the validation carried out by material experts covering several indicators in the development of interactive e-book media.

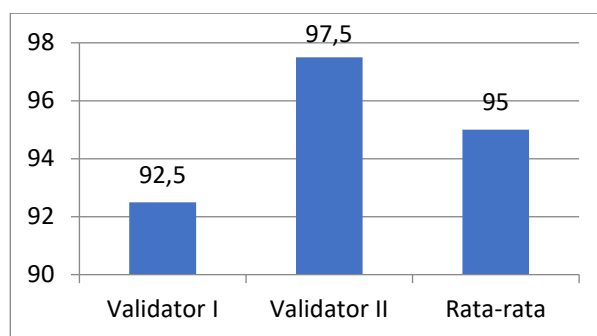
**Table 1.** Material Expert Assessment Results Using Validity Questionnaire

Rated Aspect	V.1	V.2	V.3	Skor Validation	Criteria
Material suitability	3,60	4,00	4,00	96,67%	Very Valid
Material preparation	3,60	4,00	3,60	93,33%	Very Valid
Material presentation	3,63	4,00	3,13	89,67%	Very Valid
Language	3,60	4,00	3,60	93,33%	Very Valid
Overall Score				93%	Very Valid

Information; V.1, First validator; V.2, Second Validator; V.3, Third Validator

Based on the results of the assessment given by the material expert validator, it was found that each of the aspects assessed, namely the suitability of the material, aspects of material preparation, aspects of material presentation and linguistic aspects obtained very valid criteria. Based on BSNP regulations (2014) in [8] It is stated that the assessment of language accuracy is related to the accuracy of spelling, grammar, sentence structure, and term accuracy. Thus, the interactive e-book that has been developed is suitable for use in accordance with the assessment of the linguistic feasibility aspect

An interactive e-book media validator conducted by two media experts to find out that the media presentation is good and feasible to use. Media validation is carried out by lecturers in the Department of Information and Communication Technology. The following are the results of the validation carried out by media experts which include several indicators related to interactive e-book media.



**Figure 1.** Interactive E-Book Media Expert Validation Results

Based on the results of the assessment by two media experts, the validation of interactive e-book media in general is in the very valid category with a score of 95%. The results of the assessment from media experts and media experts provide very valid assessment results with revisions made according to the validator's suggestions. As stated by [9] To produce learning media, it is necessary to design structures, contents and appearances that are in accordance with the competencies that have been determined.

#### **4 Conclusion**

Based on the formulation, objectives, results and discussion of research on the development of interactive e-book media on women's basic clothing courses that have been described previously, it can be concluded that, Validity of the interactive e-book media for women's basic clothing is valid and feasible to be used as a learning medium. Based on the assessment of material experts and learning media experts, the results obtained with valid criteria. Thus, based on the conclusions above, it generally shows that the interactive e-book media that has been developed is very valid to continue to the next stage.

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