Development of Fashion Accessories Material Module Based on E-book

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Abstract

This research is a research and development (Research and Development) which aimed to determine 1) The procedure for developing an e-book-based accessory learning module in the fashion accessory course, 2) The level of feasibility of the accessory e-book in the fashion accessory course. This research produced a product in the form of an e-book-based learning media that has been declared valid and feasible to use based on validation and product trials on students. The results of the study concluded that: 1) This development research used a 4-D model which includes: defining, planning (design), developing (develop), and disseminating (disseminate). 2) The level of e-book feasibility was in the very feasible category and valid based on the results of the validation test by material experts seen from the aspects of Self-Instructional, Self-Contained, Stand Alone, Adaptive, and User Friendly aspects, with a percentage obtained of 89.5%, and validation tests by media experts seen from the aspects of the shape and size of the e-book, organization, attractiveness, format, and consistency, with a percentage obtained of 91.75%.

Keywords: Module, development, e-book, accessories.

Introduction

Education is a process of interaction between individuals and various entities such as humans, society, and the environment. The educational process indirectly helps students optimize their potential to gain broader knowledge and continue learning as far as possible. The impact of education is very significant in the development of individuals and society by increasing emotional abilities in facing challenges and motor skills in coordinating individual movements.

Education acts as a means to increase the nation's intelligence with the aim of developing the potential of students to create competent Human Resources (HR) in facing global competition between countries. This principle is in accordance with Law No. 20 of 2003 article 3 concerning the Basis, Functions, and Objectives of the National Education System which emphasizes that national education plays a role in developing abilities and forming the character of a civilized nation in order to improve the quality of life of society.

The development in the field of Science and Technology currently has a significant impact on human life, including in the education sector. The advancement of Science and Technology encourages the need for innovation in the use of technology in the learning process, so that the learning approach in education must continue to develop. In accordance with Law No. 20 of 2003 article 1 section 2, national education is based on the values of Pancasila and the 1945 Constitution of the Republic of Indonesia which reflect religious values, Indonesian national culture, and are responsive to the development of the times.

Therefore, the design and evolution of learning materials such as curriculum must be in line with the development of Science and Technology.

The Bachelor Degree of Family Welfare Education Study Program at the Faculty of Engineering, Makassar State University is one of the vocational education programs that prepares graduates to enter the workforce according to the specializations studied. This study program has several concentrations, including the fashion design concentration which not only prepares graduates for a career, but also to become educators. Therefore, students are required to have a deep understanding both theoretically and practically related to the courses taught. One example is the fashion complement course which discusses various types of clothing to complement the appearance in dressing.

Fashion accessories refer to items used to enhance the perfection of clothing, both for practical and aesthetic purposes (Asiani, 2019). Fashion accessories include a variety of items that can be worn to complement a person's appearance or beautify the clothes they wear. The purpose of fashion accessories is to revive classic styles, enhance the fashionability of clothing, add color, and attract attention. Fashion accessories can be grouped into three categories, namely milliners, accessories, and garniture. Millinery is an object that functions as a complement to clothing and provides direct benefits to the wearer, accessories are used to add beauty and harmony to the appearance, while garniture is an additional material used to beautify clothing or household furniture.

The fashion accessory course is part of the creative skills curriculum that demands wisdom and innovation from students. This course must be taken by students in the Fashion Design concentration in 4th semester with 3 credits, which provides an understanding of the process of creating a product. n this course, students are expected to be able to recognize and understand various types of fashion accessories because this knowledge is important for a fashion design student to design attractive works. In addition, students are expected to be able to apply this knowledge in dressing and designing clothes well after taking the course.

After conducting an interview with the lecturer of the fashion accessory course, it was revealed that the teaching materials used in the learning process were in the form of printed modules. This encouraged me to develop e-book-based teaching materials in flipbook format. Compared to printed materials, e-book flipbook offers more interesting learning experience, especially since this course covers theoretical and practical aspects that involve many manufacturing steps. E-book flipbook is a three-dimensional digital format that can present text, images, videos, music, and animations, which will be very useful for students in the learning process. With these features, e-book flipbook can make it easier for students to understand the manufacturing steps that were previously only written on paper, now they can be explained through video tutorials.

The use of technology in education provides various benefits for the learning process. One of its implementations is through the development of teaching materials in e-book format, which utilizes computer or electronic devices such as smartphone as a learning tool. Among students, smartphone is the most commonly used technology products. According to data from the Ministry of Communication and Information, the number of smartphone users in Indonesia has reached 167 million people or around 89% (Zubaedah, 2021). Compared to print media, the use of electronic media is more effective and efficient in storage because print media is prone to damage and loss, while electronic media can be accessed anywhere, making it easier for students to access learning materials without having to meet face to face with lecturers (Nazaruddin, 2021).

E-book is one kind of learning media that utilizes technological advances, with the ease of use and storage of e-book on devices such as mobile phone, tablet, or laptop, allowing students to carry learning materials practically and can be accessed anytime and anywhere. With e-book, students no longer need to bother carrying printed books

anywhere, so the use of e-book as a learning medium offers greater flexibility than printed book (Halida, 2019).

E-book is a very suitable option as a learning resource because they can present learning materials in an interesting and interactive way with additional image, audio, and video. E-book, or electronic book, are digital version of textbook, which can also be considered as learning platforms that integrate applications with multimedia databases as a source of instruction, providing multimedia presentations on certain topics (Shiratuddin, 2003).

Based on the description above, the researcher interested in developing a module that discusses one of the materials in the fashion accessory course, namely accessories. The researcher chose accessories because compared to milliners and garniture, the material on accessories is quite long to discuss and is very important for students to understand. In addition, accessories are very attached to humans themselves because they are something that is used in every activity. Therefore, it would be nice if there was one teaching material that specifically discusses the material on accessories. This development research will produce a teaching material product entitled "Development of a Fashion Accessory Material Module Based on E-books".

Methods
Types of the Research
This research is a research and development (R&D) project that aims to develop teaching materials in the fashion accessory course. This research uses a 4D model approach. The R&D method is a research method used to create special products and test their effectiveness (Sugiono, 2015). The 4D research model consists of four stages, namely definition, design, development, and distribution. This research aims to create a product in the form of e-book-based teaching materials that discuss the topic of accessories in the fashion accessory course, with the aim of improving students' knowledge and skills.

Development Procedure
a. Define

The define part aims to determine and describe the basic needs in the learning process and collect information related to the product to be developed. At this part, the activities carried out are to determine and describe the development requirements. The first step in determining learning requirements is to conduct an analysis of the objectives and limitations of the material which consists of five main steps:

a) Initial Analysis

In this part, problem identification was carried out through observation and interviews with students in Fashion Design concentrate. The results of the identification revealed the problem faced by lecturers and students in the learning process, especially in the use of teaching materials during lectures. This part, facts and solution options were introduced to facilitate the determination of the initial steps in developing learning devices for complementary fashion courses.

b) Student Analysis

Student analysis is an evaluation of the characteristics of students that match the design and development of learning devices, which are in accordance with the research targets of PKK students' in Fashion Design concentrate, Faculty of Enginering UNM. This student analysis is carried out to identify student characteristics by considering the abilities, traits, and experiences of students, both collectively and individually.

c) Task Analysis

Task analysis aims to identify the steps to complete a task in order to achieve a basic competency. This analysis is related to the material developed through the creation of accessory learning modules based on the established basic competencies.

d) Concept Analysis

In this part, the main concept to be taught identified based on the material through module development. Concept analysis does not only include analyzing the concepts to be taught but also formulating the steps to be taken logically.

e) Formulating the Learning Objectives

This part is carried out to determine the learning objectives to be achieved in accordance with the material to be studied. It serves as a foundation in the preparation of the learning module being developed. By formulating learning objectives, researchers can identify the concepts to be presented in the module, design the question grid, and finally assess the extent to which the learning objectives have been achieved.

b. Design

The goal of this stage is to produce a product that match with the data collected in the previous stage. This design phase includes:

a) Teaching Material Selection

The process of selecting teaching materials is important to identify learning media that are appropriate to the characteristics of the material and the needs of students. The selection of media must be based on maximizing the use of teaching materials in development and helping students achieve basic competencies.

b) Format Selection

The selection of format in module development aims to determine the content of e-book teaching materials, strategies, methods, learning resources, learning content design, and creating an e-book design that includes layout, images, and text.

c) Initial Design

The initial design is prepared based on the results of the previous analysis. This initial design includes the overall plan of the learning device that must be completed before the trial phase is carried out.

c. Development

The development part consists of two, namely expert assessment and development trials, which aim to create effective learning tools through trials and revision processes.

a) Validation

Expert assessment is used to validate and assess product quality. With this assessment, researchers receive input from experts in their fields. The input is used to improve the learning tools that are being developed and revised based on expert advice. Through expert assessment, it is expected to produce effective, valid, practical, and quality learning tools.

b) Product Trial

Development trial is the actual trial stage. This activity is carried out to obtain data in the form of responses, reactions, or comments from product users regarding the learning devices that have been prepared. In this stage, repeated trials and revisions are carried out as a step of improvement to achieve effective results.

d. Disseminate

After the product revised in the development stage, it will be implemented on real target users. This process will be evaluated to measure the achievement of goals in order to assess its effectiveness. After the product implemented, researchers need to evaluate the achievement of goals to determine whether or not the goals have been achieved. If the goals have not been achieved, solutions need to

be identified to prevent the same mistakes from happening again after the product is disseminated.

Technique of the Data Collection

There are several techniques that can be used to collect the data. The data has different functions and should be used appropriately according to the purpose of the research and the type of data to be collected. In this study, the researcher used several data collection methods, namely observation, documentation, and questionnaires.

Research Instrument

This study includes quantitative and qualitative research, the data were collected then analyzed quantitatively using descriptive statistics. Quantitative data obtained from the results of the validation sheet of material experts, media experts and student test questionnaires containing numbers obtained from student trial answer scores, while qualitative data was an assessment, response, suggestions, quality categories.

Technique of the Data Analysis

The method used to analyze the data in this study was descriptive analysis technique. According to Sugiono (2015), descriptive data analysis is a statistical method used to analyze data by describing the data that has been collected as it is, without the intention of making general conclusions or generalizations. Based on data from the validation questionnaire, the formula used to process data and responses from content experts, design experts, and students is by using percentages (Arikunto, 2008).

Results

The product produced in this research and development was an e-book based teaching material for the fashion accessories course, especially for the accessories material.

a. The procedure for developing an E-book-based module for accessory material in the fashion accessory course was carried out using the 4D development model by Thiangarajan. The 4D model involves analyzing the needs of E-book accessory teaching materials (Definition), designing learning media in the form of E-book accessories (Design), developing learning media in the form of E-books (Development), and promoting learning media products in the form of E-books (Distribution). The development process aims to ensure that the developed learning media can be used effectively in the learning process, both by lecturers and students in studying the fashion accessory course, especially related to milliners. The result was a learning media product in the form of an E-book that reviews material about accessories.

b. Results of the Feasibility Test of E-book-Based Accessory Teaching Materials in the Fashion Accessories Course. To assess the level of e-book eligibility, a validity test was conducted by material experts and media experts to determine whether the product that had been created was suitable for use. The researchers submitted the product along with the questionnaire to the validator for assessment. Based on the results of the validity test, the e-book was declared valid with several improvements so that it could be used in the learning process. Evaluation of the millennial e-book by material expert 1 and material expert 2 showed that the e-book was included in the very valid category for use, with the percentage results obtained:
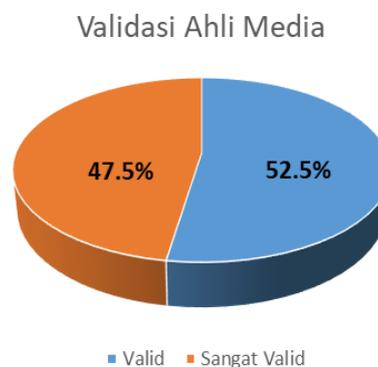
$$\mathbf{P} = \frac{f}{N} \text{ x } 100\%$$

$$P = \frac{175 + 183}{200 + 200} \text{ x } 100\%$$

$$P = \frac{358}{400} \text{ x } 100\%$$

$$P = 89.5\%$$

The percentage of the result shows that 89.5% is in the "Very Good" category with the equivalent of "Very Adequate"

Validasi Ahli Media

Picture 1. Diagram of Material Expert Validation Results

Meanwhile, the result of the assessment of the accessory e-books carried out by media expert 1 and media expert 2 stated that the e-books were in the very valid category for use with the following percentage result obtained:
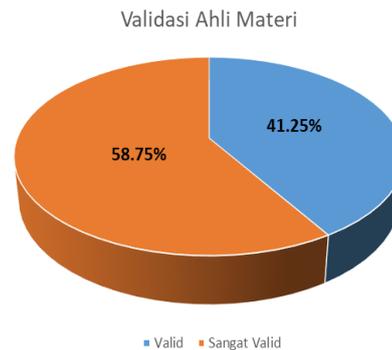
$$P = \frac{f}{N} \text{ x } 100\%$$

$$P = \frac{180 + 187}{200 + 200} \text{ x } 100\%$$

$$P = \frac{367}{400} \text{ x } 100\%$$

$$P = 91{,}75\%$$

The percentage result shows a figure of 91.75% with the category "Very Good" and the equivalent of "Very Decent"

Picture 2. Media Expert Validation Result Diagram

Discussion

Based on the research results above, the following are the discussion of the research results:

a. Development Procedure

The development of this E-book uses the R&D (Research and Development) research and development approach with the 4-D development model developed by Thiagarajani. This development model consists of four stages, namely defining, designing, developing, and disseminating, with the aim of creating teaching materials in the form of millennial E-books to be used in additional fashion courses.

The result of the study at the definition stage show that currently the teaching materials in the learning process are only in printed form owned by the lecturer. Students need teaching materials that can make it easier for them to learn the accessories material in the fashion complement course flexibly. Therefore, it is important to develop teaching materials that are in accordance with technological developments, more comprehensive, interesting, and can be a reference for students in learning accessories material. The module is developed in E-book format to make it easier for students to learn anywhere and anytime.

The development stage is a key stage in the process of creating an E-book. Researchers collaborated with course lecturers and supervisors to improve the E-book with input and suggestions before submitted to experts for validation testing. Validation testing was carried out by material experts and media experts to obtain constructive input, criticism, and suggestions to improve the quality of the E-book. In addition, filling out a validation questionnaire was also carried out to assess the feasibility of the E-book.kualitas E-book.

The final stage is dissemination, the final stage of the development research after the E-book-based accessory teaching materials are declared suitable for use in the learning process of additional fashion courses. The distribution of E-books was carried out by distributing the E-book teaching material product files to lecturers and students through the links provided.

b. Eligibility of e-book

The results of the research on the feasibility of E-book as teaching materials in the learning process can be concluded from the results of validation tests by material experts, media experts, and feasibility assessments by students as follows:

a) Material Expert

Based on the evaluation of the material expert, there are five aspects of assessment, namely Self-Instructional, Self-Contained, Stand Alone, Adaptive, and User Friendly. The assessment of material expert 1 and material expert 2 on the five aspects resulted in scores of 5, 4, and 3, indicating that the content of

the E-book-based teaching materials was considered quite good, good, and very good. From the analysis of the five aspects, a percentage of 89.5% was obtained, indicating a level of success that was categorized as "very good" and equivalent to "very decent".

b) Media Expert

The evaluation results from media experts showed five aspects of assessment, namely the form and size of the E-book, organization, appeal, format, and consistency. The assessments from media expert 1 and media expert 2 on the five aspects resulted in scores of 5, 4, and 3, indicating that the quality of the content of the E-book-based teaching materials was considered quite good, good, and very good. From the analysis of the five aspects, a percentage of 91.75% was obtained, indicating a level of success classified as "very good" and equivalent to "very decent".

Conclusion

Based on the results of the research and development that have been explained and the analysis of the formulated problems, it can be concluded that:

a. This study applied Research and Development (R&D) method, which is a research approach to produce specific products and test their effectiveness. This study followed the 4-D development model consisting of four stages, namely define, design, develop , and dissaminate.

b. The result of learning media, namely the E-book of accesory, assessed as "Very Eligible" for use in the learning process at the Family Welfare Education Department, Faculty of Engineering, State University of Makassar. The validity of the E-book was stated after going through a validation process by material experts and media experts who stated that the E-book was feasible to use.

Acknowledgments

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