Developing media of decorative buttons for students in creative fabrics course at fashion design program, state university of malang

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Abstract.

During a pandemic, online learning media is the primary tool in lectures. In light of this, lecturers in the Fashion Design study program at the State University of Malang needed to develop clear and inspirational media to support 60% of the practical course. The goal was to create two tutorial videos of round and square buttons to teach decorative buttons stitching in the Creative Fabrics course. These videos were expected to impart and provide new insights to increase students' creativity in making several forms of buttons using various decorative stitches methods as fashion decorations. The ADDIE model was utilized as the analysis tool. The validation result showed that the data was valid, complemented with the result from media expert of 80.4%, material expert of 83.3%, and feasibility study of 93%. The result showed that the videos were feasible and valid to be used as media for teaching and learning. The videos were considered easy to understand and encouraged students to implement the learning materials. The conclusion was that the tutorial videos were suitable for the Creative Fabrics course.

1. Introduction

The current world of education is influenced by the vast development of information and communication technology to change the pattern of reasoning in the teaching and learning process. The quality of education must take advantage of these technological advances to support educators in achieving state-of-the-art education in Indonesia. As a formal institution, the State University of Malang always tries to improve its learning approach through various means, one of which is through the development of Curriculum 18.

With the vast development of technology in the teaching and learning process, teachers must utilize and develop advanced learning techniques to assist students in engaging, guiding, and relearning the materials effortlessly, interestingly, and efficiently. In using media when delivering the materials, the teaching and learning process becomes more engaging and not monotonous for both the teachers and students. As stated by [1], learning media channels messages, stimulates feelings, thoughts, will, attention, and learning skills which encourages the creation of successful teaching and learning process. Learning media designed for specific needs and uses helps teachers or lecturers guide the recipients of the messages, or students, in learning independently.

Currently, various engaging media are provided in classes so that anyone can choose the correct and appropriate ones, such as multimedia, to achieve the educational activities success. [2] stated that multimedia provides information enacted through activities that can be seen, heard, and done, thus making it very effective in teaching and learning. Students must utilize this interactive multimedia to learn the materials from campus hours, especially for self-study, without being limited by time.

Along with the development of the Curriculum 2018, there were several additional courses in the Fashion Design study program as a part of the Department of Industrial Technology, one of which was the Creative Fabrics course. It has two Learning Objectives (Los) and is a practical course where students can implement experimental designs to produce clothes that are wearable and unique. The multimedia availability of videos developed in the course help lecturers in the teaching process and students for their personal needs should there be some parts of the material that they still do not understand. It was expected that students would be more motivated in learning Creative Fabrics, especially in the process of creating handmade decorative

buttons using various decorative stitches. To date, decorative buttons made with decorative stitches have not been retailed anywhere, and students cannot visualize nor understand the product in question.

From the above explanation, lecturers in the Creative Fabrics course wanted to create two videos and develop them as interactive learning media to be used by students to impart their horizons and expand their creativity in learning how to create decorative buttons using decorative stitches. The video format was chosen as the suitable learning media since the course contains practical lessons in making and building products; also, many projects are challenging to convey through written text or speeches. Moreover, with the limited practice hours, interactive media was deemed suitable for overcoming this issue. To bridge this issue, the researcher chose to use audio-visual media to explain practical things through step-by-step shots in making various kinds of handmade decorative stitches on the surface of the cloth and forming them into decorative buttons.

2. Learning Media
The vast development in science and technology impacts human reasoning at a macro level and in education, which has also undergone rapid changes. Of course, these changes challenge educators to be prepared. Educators are expected to take advantage of them to administer the best learning activities to facilitate the students. In many ways, media is a beneficial teaching tool that supports teachers or lecturers in conveying the materials they are assigned to. Aside from supporting the teachers or lecturers, choosing suitable media also encourages students to learn. Judging from the media's important role in avant-garde education, teachers or lecturers must use the advantages that learning media can offer. Moreover, it is also necessary to understand the characteristics and functions of each media so that teachers or lecturers can decide on the media that suits the materials or teaching approach best.

2.1. Video-based Interactive Learning Media
Multimedia offers many advantages that attract public attention, not to mention it also improves the quality of information delivery and is complemented by text, images, audio and video, and animation [3]. Another supporting opinion stated that a multimedia is a tool that can create dynamic and interactive presentations that combine text, graphics, animation, and audio and video [4]. In multimedia learning, software and applications are utilized within the learning process to transmit messages, knowledge and attitudes, and skills and stimulate thoughts, feelings, attention, and willingness of the students. Multimedia becomes the initial solution when teachers and students undergo online learning; thus, in addition to being a solution, multimedia is also the state-of-the-art learning model and system for creativity and entertainment. It provides the latest interface with the development of science and technology [5]. Since the role of multimedia is to provide visual, auditory, and kinesthetic materials or information, it has been deemed a comprehensive, groundbreaking tool in assisting the teaching and learning process.

2.2. Creative Fabrics Course in the Fashion Design Study Program
Creative Fabric is a compulsory course in the Fashion Design study program presented in the odd semester with 3 credits (SKS) and 6 JS [6]. One of the course's learning outcomes (CPMK) is that students explore various decorative works using decorative techniques on the surface of clothing materials, on woven fabrics, or a combination of the two according to the creative designs. The outline of this course includes the theory delivered at the beginning of the course and continues with making various decorations on clothing materials. One of the themes assigned for the students is creating decorative buttons using decorative stitches. This theme requires students to make handmade decorative buttons using decorative stitches on various shapes and sizes. This activity is intended to encourage students to be creative and utilize patchwork from the waste of previous fashion practices and introduce them to the importance of sustainable fashion.

Hence, besides being knowledgeable about the design, materials, and techniques of decorative stitches, students are also required to understand the selection of the clothing materials, threads, and stitches used as adjusted to the assigned theme. The students are expected to create decorative buttons in various shapes and sizes using decorative stitches.

3. Objectives of the Study
The purposes of this research were: establishing the appropriate learning media to overcome the issues in the teaching and learning process to impart and provide new insights as well as improve students' creativity in

decorating clothes with handmade round- and square-shaped buttons using decorative stitches, creating video-based interactive learning media model to enhance creativity and skills in making handmade decorative buttons, comprehending the results of the assessments of related experts and lecturers on video-based interactive learning media models as an effort to increase creativity and skills in making handmade decorative buttons, and applying interactive media to the Creative Fabrics course as the learning medium for students' self-study sessions.

4. Methodology

The design of learning innovations for students used video-based multimedia. This research adopted the ADDIE (Analysis-Design-Development-Implementation-Evaluation) model [7]. The development step began with analyzing the developed course. The next stage was preparing the draft following the course characteristics, focusing on developing the learning objectives. The development included making the videos, developing them, and revising them. The next stage was the implementation by testing it in groups of students, material experts, and media experts. The evaluation of product feasibility was done after obtaining the assessment score. Likert scale was used in calculating the product feasibility score using intervals of 1 to 4. Quantitative descriptive was conducted as the technique of the data analysis.

4.1. Findings

The development was carried out in three stages: 1) preliminary study through literature and field reviews, 2) development stage by preparing draft materials, scripts, storyboards, shooting the videos, as well as the editing process, and 3) the evaluation stage after both material and media experts validate the assessment. Material reviewers were the competent fashion design lecturers in fashion decoration, while the media expert reviewers were media practitioners.

The data was collected using closed and open questionnaires for the material and media experts to fill in to assess the video's feasibility and provide significant improvements. Thirty Fashion Design students who took the Creative Fabrics course were chosen to fill in the closed questionnaire to give feedback on the video material. The instruments were processed using the following formula [8]. Equation (1) was used for processing data per item, while equation (2) was used for processing data as a whole.

$$P = \frac{x}{xi} \text{ x } 100\% \qquad (1)$$

Description:
P: Percentage
x: Respondent's answer in each item
xi: The ideal value in each item
100%: Constants

$$P = \frac{\Sigma x}{\Sigma xi} \text{ x } 100\% \qquad (2)$$

Description:
P: Percentage
x: The total number of respondents' answers in one item
xi: The total number of ideal values in one item
100%: Constants

In processing the data for each item within the instrument, the researcher determined the scores, namely: (1) 4 for very suitable, (2) 3 for suitable, (3) 2 for somewhat suitable, and (4) 1 for unsuitable.

To establish the achieved conclusions, the success criteria were determined using the result interpretation guidelines in Table 1.

Table 1. Data Analysis Results Criteria

Test Results			Follow up
Category	Percentage	Qualification	
4	85%-100%	Very valid	Implementation
3	75%-84%	Valid	Implementation
2	55%-74%	Somewhat valid	Revision
1	<55%	Invalid	Revision

The analysis results from the material experts are shown in the image below.
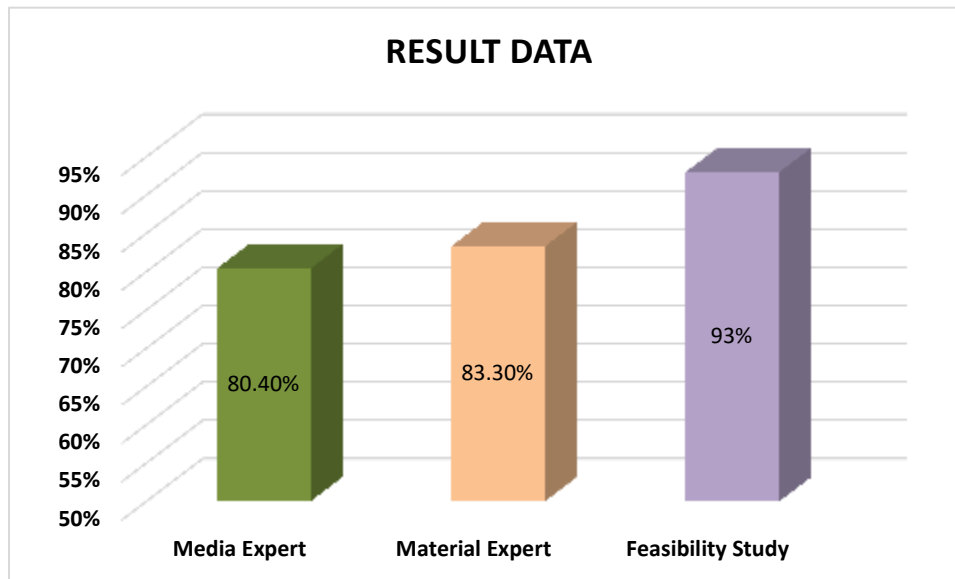

Figure 1. Results from Media Expert, Material Experts, and Feasibility Study

The diagram above shows that 80.4% of the data is valid. The media experts determined that 83.3% of the data is also valid. The feasibility study shows that 93% of the video is in the very feasible category.

5. Discussion

Online learning has been implemented worldwide since the COVID-19 outbreak in 2019 to stop the virus transmission among teachers and students. Starting March 2020, the Minister of Education and Culture has issued a letter to schools and universities in Indonesia to conduct teaching and learning from home. [9] argued that the worldwide pandemic constraints society to adapt quickly. The abrupt distance learning instructions certainly require lecturers and students to rely on. For example, handmade decorative buttons using decorative stitches has yet to be retailed, and there are no visible examples for the students to refer to in completing the Creative Fabrics course assignments. Thus, lecturers needed to create videos that provide examples, impart new insights, and inspire creativity to achieve the learning objectives. The pandemic forced lecturers to make rapid transformational leaps to overcome online distance learning. The learning media for decorative buttons in the Creative Fabrics course was two tutorial videos: decorative buttons in a round and square shape. Students could watch the videos online and offline if they download the videos.

The results were obtained from the validation data. The material experts' validation score was 80.4%; that score was valid. Generally, it showed that the presented material follows the expected purpose. The videos were beneficial for students because they could directly observe the process of button-making using decorative stitches. The process covered design, tools and materials, decorating steps, and shaping the buttons. Therefore, the video was proper for learning.

The media analysis results concluded that the broadcast had an 83.3% score and was valid. The video was easy to operate by students with engaging writing format and dubbing to follow the correct pronunciation and understanding.

The 93% result was included in the very feasible criteria based on the field feasibility test. This high score was obtained because the material was easy to understand and motivated students in creativity. This follows the statement of [5] that multimedia is the initial solution in the implementation of online learning, and it becomes a creative, entertaining learning model parallel with the developments of science and technology worldwide. The tutorials project on making decorative buttons begins with a brief explanation of the purpose of making them, tools and material, the step-by-step procedures, and the application of ready-to-use products. The shots were arranged coherently to help students create handmade button works using other variations of stitches. This parallels [10] Baugh's argument that ±90% of the learning outcomes can be achieved through visual activities, 5% through auditory activities, and the last 5% through kinesthetic activities. Therefore, making video tutorials as the learning media will increase the enthusiasm and agility of

the fashion design students to improve their learning outcomes in a practical course. [11] also stated about learning activities emphasizing more on competencies related to practical skills, and thus learning media is a significant value in the bigger picture of the course. The storyboards of both videos were well organized, starting from the overview of the objectives with the projections of images and sounds complemented by texts to clarify further the crucial parts of the shots, which made them easier to understand. Interactive multimedia to channel messages stimulates students' thoughts, feelings, attention, and willingness, so they are encouraged to use a more interactive and communicative learning process [9]. Students receive materials from the videos, but they can also develop their creativity and give more value to the products that they make themselves.

6. Conclusion

Based on the analysis of the video-based learning media for the Creative Fabrics course, the conclusion was as follows: the tutorial videos on making decorative buttons using decorative stitches were feasible to use for the course. Although the material was presented in coherent steps, it still needed implementation other than fashion. This research suggests further researches to improve the tutorial videos on decorative buttons for other objects as decorations.

Acknowledgments

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