

Knife Pleated Skirt Multimedia Video Tutorial to Improve Learning Quality

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Abstract—Knife pleated skirt is one of the learning materials in the fashion pattern analysis course, UPI FPTK Fashion Education. Based on a preliminary study of 25 2013 fashion design students who had participated in the knife pleated skirt study, currently the learning used is still conventional, namely by demonstrating and using job sheet, power point, and fragment media. From the results of the preliminary study it was found that there were problems in learning how to determine the amount of fabric needed with the number of pleats and body size. For students who are slow in receiving the material, there needs to be a repetition of learning that can help students without the limited space and time to learn knife pleated skirt material. This study aims to overcome the problems experienced by students, by creating new learning media, namely multimedia knife pleated skirt video tutorials. The method used in this study is the Research and Development (R & D) method, with the stages carried out namely identification, planning, making, validation and testing, and the assessment phase. From the results of validation and field trials, it can be described that the making of knife pleated skirt video tutorials was made into a decent category with the assessment percentage of each validator and user was 95.97% by multimedia experts, 93.21% of material experts, and 91.24% by users. Thus, it can be concluded that the creation of a knife pleated skirt multimedia video tutorial is suitable for use.

Keywords—*research and development method; multimedia video tutorial; knife pleated skirt*

I. INTRODUCTION

The development of the world of education is increasingly rapid and complex, inseparable from the demands of the community for the quality and quantity of education. The quality of education that is balanced with adequate teacher qualifications will affect the quality of graduates. The use of multimedia in learning can improve the quality of student learning, this is evidenced by the results of research by the British Association for Vedic Astrology (BAVA) in the United States mentioning the importance of multimedia in the teaching and learning process: teachers or teaching staff who teach only use verbal symbols that are absorbed only 13% and that will not last long, while those who use multimedia can reach 64% to 84% and last longer" [1]. Multimedia-assisted learning, the level of mastery of the material achieved by students can be adjusted to their abilities. Students who have problems in

understanding the material, or can be said to be slow in capturing subject matter can be solved by using multimedia. With the use of multimedia students can repeat the material in parts that are not understood, and with the help of this multimedia material is easy to learn independently anywhere and anytime.

Multimedia is currently experiencing development, one of which is multimedia video for learning. Multimedia video in learning is a tool or media used in the learning process, which can display the arrangement of images or sequences of moving images into illustrations, to display an object or process, which is used to describe activities, so that it is memorable and interactive and communicative. Multimedia video tutorial is a tool or learning media that integrates audio and visual (video) as a tutor, which aims to provide understanding regarding the material being studied. Multimedia video tutorial is a learning tool that can display the process of activities sequentially which is made to make it easier for someone to learn independently, one of them in the process of making clothes.

Fashion making is a skill that must be mastered by every student of the FPTK UPI PKK Fashion Education Study Program. The expertise in making clothes for students of the Fashion Education Study Program can be obtained from the learning outcomes in the Skills Study Group (MKK). The Skills Course (MKK) is intended to develop the ability of students in the field of study expertise, as in the Course of Fashion Pattern Analysis, one of the competencies students must possess is to be able to make knife pleated skirts. Knife pleated skirt is a model of pleated skirt that has one-fold line leading in the same direction, usually made around the waist and around the pelvic circumference. The amount, size and depth of pleated will be affected by the size of the body. Pleated amount can be determined based on the skirt model or availability of existing fabric. Accuracy in determining the size, depth, and amount of pleated can produce a beautiful and fitting model knife pleated skirt according to the shape of the body size.

Making knife pleated skirts can be done by using a construction pattern that is done in stages starting from the stage of analyzing the model image, choosing fabric, making patterns on paper, cutting paper patterns, attaching patterns to cloth, marking paper patterns on fabric, cutting fabric according to the pattern and process of sewing skirts. The

second way is to make a knife pleated skirt without using a pattern, meaning that the pattern is made directly on the fabric. In this second method, accuracy and accuracy are needed in analyzing waist circumference and pelvic circumference, which is then adjusted to the desired number of pleats. The steps that must be taken in the manufacture of pleated skirts in the same direction are design analysis, fabric selection, understanding model drawings, body measurements, pattern making on fabrics, and the process of sewing skirts.

At present the learning methods used in knife pleated skirts without a pattern in the Clothing Pattern Analysis course are still felt difficult by students, especially those who have problems in understanding the material of clothing. Students who are slow in understanding subject matter tend to need repetition of the material presented. Problems also arise during learning at home, sometimes students forget about the material they have been taught in class.

In the learning process, there are still things that are teacher centered, text book oriented, and lecturers using learning media that are not enough to help students understand the material in learning. This situation causes less optimal learning in this case students become less active, interest in learning is reduced and students do not study independently. This was proven based on a preliminary study conducted by the researcher, in the 2015 class of Fashion Education Study Program students who had completed the Busan Pattern Analysis course with 25 students as respondents. The results of this preliminary study were 54.2% of respondents answered that the media used more often was job sheets, 25% of respondents answered that the media that was used more frequently was demonstration, 6.3% of respondents answered that the media used more frequently was fragments and 2% of respondents answered media that is more commonly used is power point. From the results of observations on the questioner of the preliminary study, respondents felt that the media currently in use still had deficiencies, including learning that could not be repeated outside the classroom and the limitations of space and time in understanding the material, "are stuck in the 20th century. Student has rushed into the 21st. How can schools catch up and provide students with a relevant education? [2]. This indicates the limitations of a school in providing relevant education for students, meaning that additional media are needed that can help improve the media currently used by lecturers in the classroom, one of which is using the multimedia video tutorial.

In this study, researchers will try to make knife pleated skirt multimedia video tutorials, because this media is considered to be able to overcome problems that are often encountered in learning knife pleated skirts without a pattern. Multimedia video tutorials encourage students to learn independently, help students who are slow to understand the material because the explanation of the material presented in the video can be repeated according to students' understanding needs, help students understand more deeply about the material, and help present knife pleated skirt learning material without more interesting patterns. The multimedia tutorial video was chosen so that learning material is easily learned through gadgets in the form of smartphones, tablets, and laptops, so students can study whenever and wherever.

Indicators that need to be understood in making knife pleated skirts through multimedia video tutorials include: understanding the model of knife pleated skirts to be made, choosing fabrics for pleated skirt making, understanding model drawings, body measurement techniques, making patterns on cloth by dividing waist circumference and hip circumference according to the desired number of pleats and the technique of sewing a knife pleated skirt.

From the background description above, it becomes the rationale for conducting research on knife pleated skirt multimedia video tutorials to improve learning. The use of multimedia video tutorials is considered to be an alternative to overcome the problem of student learning in learning pattern less knife pleated skirts, so that it is expected to improve the quality of learning outcomes and student interest in learning pattern less knife making pleated skirts.

II. FINDINGS AND DISCUSSION

A. Findings

The findings or results of the research on the making of knife pleated skirt tutorial videos that have been implemented can be described at each stage in the design and manufacture of these multimedia videos, namely as follows:

1) *Identification in knife pleated skirt learning:* Identification is done by giving quisioners or questionnaires to students who have taken the Clothing Pattern Analysis course. From identification it was found that the learning media that are currently used are still conventional, namely by using jobsheets, demonstrations, power points, and fragments. However, in the implementation of these four media, they still have deficiencies, especially in the learning process outside the classroom, or when students want to review the knife learning material pleated skirt, so that multimedia is needed to help students overcome the problem.

2) *Planning in making multimedia video tutorial knife pleated skirt:* Several stages are carried out in the design and planning stages, namely planning goals and benefits in knife pleated skirt multimedia video tutorials, planning multimedia concepts, multimedia design (storyline and storyboard), gathering materials needed in the process of making multimedia (software and hardware), qualifications of parties who will be involved in the knife tutorial video pleated skirt multimedia.

3) *Making the multimedia pleated skirt knife multimedia video tutorial:* The stage is carried out at the stage of making multimedia tutorial videos, namely: video shooting, dubbing (voice recorder), and the process of creating multimedia.

4) *Validation and trial test for multimedia video tutorial knife pleated skirt*

a) *Validate multimedia products by multimedia experts:* Validation of multimedia video tutorials on knife pleated skirts was conducted at the Langlang Buana University Teaching and Education Faculty in Bandung to multimedia experts as well as lecturers in learning media courses. Assessment aspects are seen in the validation by multimedia

experts, namely: general appearance of knife pleated skirt multimedia video tutorials, multimedia display on knife pleated skirt material presentation, multimedia display on video preparation tools and materials, multimedia display on knife making videos pleated skirt, multimedia display on the product end video, and a general assessment of the making of knife pleated skirt tutorial multimedia videos.

b) Validating multimedia products by material experts: Validation of video tutorials on knife pleated skirts is done at Bandung BPP Vocational School to teachers who teach pattern making and teachers who teach knife pleated skirts. Assessment aspects seen in the validation by multimedia experts, namely: material understanding knife pleated skirt, material selection of knife pleated skirt fabric, material understanding images, body measuring material techniques,

material tools and materials, material stages of knife pleated skirt making, and general assessment of knife learning material pleated skirt.

c) Product validation by multimedia users: Validation of knife pleated skirt video tutorial users to 15 students of the 2015 UPI Fashion Design Education Study Program who had taken courses in Fashion Pattern Analysis. Aspects of assessment carried out by users, namely: Display of making knife pleated skirt multimedia videos, and general assessment of tutorial video multimedia knife pleated skirt.

Results of analysis of multimedia products that have been validated by experts and users.

- Analysis of multimedia products that have been validated by multimedia experts

TABLE I. VALIDATION OF MULTIMEDIA EXPERTS

No.	Aspect	Number of items	Critical Score	Total Score	Number of Validator	Average	(%)
1	General Display of Multimedia Video Making knife pleated skirt	7	28	53	2	26,5	94,6
2	Multimedia Display Material presentation video	4	16	30	2	15	93,75
3	Display of Multimedia Video Tools and Materials	6	20	40	2	20	100
4	Display of Multimedia Video Making knife pleated skirt	6	20	39	2	19,5	97,5
5	Multimedia Display on Product Final Video	5	20	40	2	20	100
6	General assessment of knife tutorial video pleated skirt multimedia	1	5	9	2	4,5	90
Average							95,97

Data Processing Validation Results of Multimedia Experts

The results of the assessment obtained have an average percentage of 95.97% so that it can be categorized as appropriate to use as a multimedia video tutorial on learning knife-making pleated skirts.

- Analysis of multimedia products that have been validated by material experts

TABLE II. RESULTS OF MATERIAL EXPERT VALIDATION

No.	Aspect	Number of items	Critical Score	Total Score	Number of Validator	Average	(%)
General							
1	General Score	1	5	9	2	4,5	90
Understanding Knife Pleated Skirt							
2	Explain the meaning of knife pleated skirt	1	4	8	2	4	100
Selection of Knife Pleated Skirt							
3	Explain the selection of knife pleated skirt fabric	1	4	8	2	4	100
Understand the Picture of the Pleated Skirt Knife							
4	Explain the picture of knife pleated skirt	1	4	7	2	3,5	87,5

Table 2. cont.

Body Measuring Techniques							
5	Explain the technique of measuring the body in knife-making pleated skirts	1	4	8	2	4	100
Tools and Materials Preparation							
6	Explain preparation of tools and materials	1	4	8	2	4	100
The process of making a Knife Pleated Skirt							
7	Explain the process of making knife pleated skirts	1	4	6	2	3	75
Average							93,21

Results of Data Processing Validation of Material Experts

The data in table two shows the results of the validation of aspects of the assessment of knife-making pleated skirt learning materials by material experts, the results obtained have an average percentage of 93.21% which can be categorized as Eligible.

- Analysis of multimedia products that have been validated by the user

TABLE III. TEST RESULTS BY USERS

Aspect	Number of items	Critical Score	Total Score	Number of Validator	Average	(%)
Multimedia effectiveness to help understand knife learning pleated skirts	1	4	53	15	3,53	88,3
The ease of learning knife-making pleated skirt without limited space and time	1	4	57	15	3,8	95
Increased interest in student learning in knife learning pleated skirt	1	4	57	15	3,8	95
General Score	1	4	52	15	3,4	86,67
Average						91,24

Results of Trial Result Data Processing

The data table three shows the results of trials of users of knife-pleated skirt multimedia video tutorials, the results obtained had an average percentage of 91.24% which could

B. Discussion

Discussion of the results of research on the manufacture of knife pleated skirt multimedia video tutorials was compiled based on research background, research objectives, benefits of research, literature review, research methods, and data analysis. In this study, tutorial media was used in the learning of knife pleated skirts that were included in the subject of Clothing Pattern Analysis, Fashion Education Study Program, PKK Department of FPTK UPI. The results of research data regarding the manufacture of tutorial knife pleated skirt multimedia videos can be described as follows:

1) *Identification of knife pleated skirt learning:* From the results of identification, it was found that knife pleated skirt learning media that are currently used are jobsheet, demonstration, power point, and fragment. From the media used there are disadvantages and advantages that affect the teaching and learning process. Some of the shortcomings found were that not all students could understand knife

be categorized as suitable for multimedia knife-making pleated skirts.

pleated skirt material well, some students still had difficulties in digesting learning because this ability of students to capture the material presented was different.

In addition to differences in abilities possessed by students, another problem was also found that students sometimes have difficulty reviewing lessons that have been delivered in the classroom. To overcome this, students usually ask the lecturer or classmates to ask questions related to learning material. From the analysis carried out in the field, it became the basis for the study of making knife pleated skirt multimedia video tutorials to help overcome the problems in knife learning pleated skirts.

2) *Designing and designing a knife pleated skirt multimedia video tutorial:* Planning of knife pleated skirt multimedia video tutorial refers to the results of field studies that have been carried out in the previous stage. Making the design consists of 5 stages, the first stage begins with planning the goals and benefits of multimedia, the second is

planning the multimedia concept that will be created, the third is the design stage, the fourth is the collection stage of materials that will be used in the multimedia and software. The last stage is the stage of qualification of the parties involved in making multimedia.

3) *Making a knife pleated skirt multimedia video tutorial*: Multimedia development is an advanced stage of designing, this stage is carried out based on the planning stage. At this stage the shooting process is done through video shooting. In addition to the manufacturing process at the stage of developing the multimedia knife pleated skirt, a validation sheet will be made that will be used to validate multimedia with material experts, and users.

4) *Implementation of validation and trial of multimedia video tutorial knife pleated skirt*: The implementation phase is the stage of testing or validation for experts and users. The validation stage was carried out to multimedia expert validators as many as 2 people, material expert validators as many as 2 people and user validator trials were limited to students of the 2015 Class of Fashion Education as many as 15 people.

Based on the results of the validation carried out by material experts, multimedia experts and users, the multimedia tutorial video was declared "appropriate" to be used in learning. From these percentages the values of each validator and user were 95.97% by multimedia experts, 93.21% by material experts, and 91.24% by users.

5) *Stage knife pleated skirt multimedia tutorial video tutorial*: There are several inputs provided by multimedia validators and users regarding the quality of the video display, so that multimedia is repaired according to the input provided so that the video display is even better. Apart from the multimedia validator, input was also given by the material validator, input related to the knife-making pleated skirt technique. In practice, knife pleated skirts can be done with various methods, therefore the input given by the material validator is optional, why is it said because input can be the choice method when making knife pleated skirts. This input can be done in the research of making the next knife pleated skirt multimedia video tutorial, to be the method of choice in making knife pleated skirts.

6) *Stage of dissemination and implementation of the knife pleated skirt multimedia video tutorial*: Dissemination and implementation of the final multimedia results was carried out with the use of multimedia learning knife pleated skirts on the Subject Pattern Analysis Course.

III. CONCLUSION

Based on research on the making of knife pleated skirt tutorial video multimedia, the research can be concluded based on the research objectives, namely:

- A preliminary study was conducted to identify material and the use of instructional media in the

course on Fashion Pattern Analysis specifically on knife-making pleated skirt material. Based on data obtained from the results of a preliminary study conducted on 25 FPTK UPI Clothing Design Students, it was found that there was no use of multimedia video tutorials as learning media in delivering knife-making pleated skirt material.

- The planning of knife pleated skirt tutorial videos is done by planning the purpose and benefits of multimedia, planning multimedia concepts, multimedia design that contains the making of storylines and storyboards, and qualifying those involved in multimedia making such as cameramen, editors, narrators, models, validators and users. This planning stage is the basis for making knife tutorial video pleated skirt multimedia videos.
- The manufacturing phase is carried out in accordance with the planning that has been made. The steps taken in making multimedia are the shooting process, the dubbing process, the editing process, and the last is the creation of a validation sheet
- The product validation is carried out on 2 multimedia experts and 2 material experts. This aims to determine the errors and the level of multimedia feasibility of the tutorial videos that have been made to be used as learning media. Multimedia validated knife pleated skirt tutorial videos were tested to students of the 2015 Class of Clothing Education totaling 15 people. It aims to determine the level of students' understanding of knife-making pleated skirts. Validation results were analyzed to determine the results of the assessment of multimedia feasibility in knife learning pleated skirt. The next step is to make revisions based on the input given by experts.
- Assessment of validation analysis and trials showing multimedia video tutorials included in the category of "feasible" are used as knife learning media pleated skirt. The validation results from each validator were by multimedia experts 95.97%, by material experts 93.21%, and 91.24% by users.
- From the results of the assessment carried out shows that the knife pleated skirt multimedia video tutorials are ready for dissemination and implemented in the direction of a pleated skirt.

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