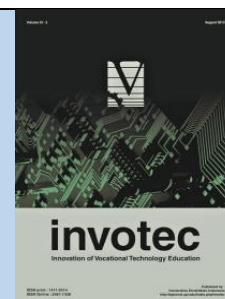




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Tutorial Video Multimedia Development Learning of White Garden

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ABSTRACT

The purpose of this study was to conduct a preliminary study of the learning media used, design and create multimedia video tutorials, perform validations from multimedia experts, material experts and users, revise, process data and analyze the results of multimedia validation of white embroidery tutorial videos. The research method used is the research and development method, this research phase starts from the design stage, the production and development stages, the validation stage and the revision stage. The findings were validated by a team of media experts, a team of material experts and users, that the embroidery tutorial multimedia videos were white and there were several revisions, namely the addition of information in the form of text in the video to the process of making white embroidery to avoid saturation. After revision, the media expert team validation results were 90.28%, the material expert team was 97.26% and 94.17% users. The conclusion is that the making of needy white embroidery tutorial multimedia is used in the learning process because it has a clear knowledge content, has an attractive and easily understood content and can be used in the white embroidery learning process.

1. Introduction

In the essence, the media of education is also a media of communication, because the educational process is also a communicational process which is specifically used to achieve a certain learning goals which was specifically formulated. Not all of educational media are learning media, but, all of learning media is a media of education (Brame, 2015). The development of the world of education directly or indirectly is currently influenced by the development of science and technology. The rise of various technology products that can be used in the world of education provides opportunities for educators to improve the quality and quantity of education. One of them is the use of technology in making multimedia learning. Multimedia learning can interact with various types of media (text, images, sound, video and animation) so that learning materials can be presented effectively and interactively. A learning media is one of method to deliver messages and information. A well-designed learning media will gradually help student to understand the cases of study. In this era of globalization and information, the development of learning media is also increas rapidly. The use of information technology (IT) as a learning media is also demanding. Although the IT-based learning media requires a special expertise, it does not mean that the learning media has to be avoided or abandoned (Kaewkiriya, 2013).

Multimedia-assisted learning, the level of mastery of the material achieved by students is adjusted to their abilities. After mastering a material then it will proceed to the next material, this will help solve the problems of the old students in capturing learning material. Learning that has implemented multimedia, it is expected to increase the interest and motivation of students in improving learning outcomes.

The research results of the British Association for Vedic Astrology (BAVA) in the United States (Rusman and Riyana, 2011) regarding the importance of multimedia in the teaching and learning process are stated: if a teacher or teaching staff only uses verbal symbols absorbed only 13% and that won't last long, while those who use multimedia can reach 64% to 84% and last longer. Multimedia technology has great potential in changing the way a person learns and obtains information.

Multimedia learning is currently being developed, one of which is through the development of multimedia video tutorials. Multimedia learning video tutorial is a tool or media used in the learning process that can display a composition of images or moving image sequences to illustrate an object or process used to describe activities so that they are memorable and interactive and communicative. Interactive multimedia presents learning material in the form of audio visual, (Sousa, et. al., 2017) reveals stressing effectiveness of visual materials in learning, estimated that about 40% of our concepts are based upon visual experience, 25% upon auditory, 17% on tactile, 15% upon miscellaneous organic sensation and 3% upon smell taste. The statement shows that broadly the process of receiving information is much influenced by visual (vision) and auditory (hearing). Multimedia learning that is used to facilitate communication in the teaching and learning process, is pursued optimally to be able to foster creativity and motivation in learning activities to improve the quality of education. One that is used in learning and is believed to be more exciting for students in lectures is a multimedia video tutorial

Interactive Multimedia is a multimedia that is equipped with a controller and can be operated by users, so users can choose what they want for the next process. Teachers can present the information in an innovative manner and motivate students to learn quickly, which means that through multimedia educators can present information in an innovative and motivating way students to learn faster. Thus using multimedia, the learning process can be done anywhere and students can learn independently (Paiva, et. al., 2015).

Multimedia video tutorial is also one of the alternative means that can optimize computer technology-based learning activities. The multimedia application of this tutorial presents learning material with a more interesting and informative appearance, so that students are expected to facilitate and increase students' interest in learning, especially in white embroidery learning.

Based on the results of the preliminary study the process of making embroidery designs needs to be supported by media that attract students to learn, be active and be able to learn independently under the guidance of lecturers. The researcher will try to develop a video-based learning multimedia tutorial that will be packaged in a tutorial format, because the tutorial format will provide an easier and more enjoyable learning experience, multimedia learning videos can be repeated in certain parts to get a more focused picture (Ali, 2016).

The background description above is the basis of the author's thoughts on conducting research on Multimedia Development Tutorial Videos on white embroidery learning. The use of multimedia technology can be an alternative to facilitate the learning process for students, so that it is expected to achieve learning goals and the quality of student learning outcomes in making white embroidery.

Multimedia learning is a learning model because it has the ability to accommodate users and users of multimedia, without the guidance of others. The right use of multimedia learning should increase learning motivation, can support the effectiveness and efficiency of learning, and can improve the achievement of predetermined learning objectives, especially in white embroidery courses. In this case the multimedia video development tutorial on white embroidery learning (Fahrurrozi, 2017).

2. Method

This study uses the research and development model of Plomp. The general model of solving education problems proposed consists of the preliminary investigation phase, design phase, construction phase, and the test phase, evaluation and revision (tests, evaluation and revision), and implementation (implementation). This study to produce products that will be used in the world of

education through scientific processes that end with validation stages. The stages in research and development have been adapted to the process of developing multimedia on white embroidery learning video tutorials.

3. Result and Discussion

In the validation stage, the assessment of multimedia embroidery tutorial videos is white by material experts and multimedia experts. Multimedia white embroidery tutorial videos were validated by white embroidery material experts and multimedia video tutorial experts, as well as tested to users, namely 2016 students of the FPTK UPI PKK Fashion Education Study Program who had contracted embroidery arts courses.

The validation stage is done to find out the shortcomings and the level of multimedia tutorials that have been made. Material validation in the white embroidery multimedia tutorial video was carried out by material experts covering several aspects, namely: general aspects, learning white embroidery theory, learning tools and materials, learning basic techniques to make white embroidery designs, learning tools and materials in white embroidery and making learning white embroidery (Molnar, 2017). The following are data obtained from the results of material validation: the data shows that the results of the validation of the assessment aspects of the white embroidery learning material by material experts have an average percentage of 97.26% which can be categorized as eligible. In a continuum the percentage of material feasibility can be seen on the following scale 97.26%.

There are 8 points of assessment aspects in the validation of white embroidery making material, 1 point regarding the evaluation of general aspects and 7 points regarding the assessment of stage learning in the process of making white embroidery. Point 1, regarding the general aspects obtained a percentage value of 100% which can be categorized as feasible. Point 2, regarding learning material for white embroidery obtains a percentage value of 100% which can be categorized as feasible. Point 3, regarding learning tools and materials in white embroidery obtains a percentage value of 100% which can be categorized as feasible. Point 4, regarding learning techniques to make a round motif that has a hole in white embroidery obtaining a percentage value of 96.85% which can be categorized as feasible. Point 5, regarding learning techniques for making teardrop motifs that have holes in white embroidery obtaining a percentage value of 93.75% which can be categorized as feasible. Point 6, regarding basic engineering learning makes the ringgitan motive in white embroidery obtain a percentage value of 90.62% which can be categorized as feasible. Point 7, regarding learning techniques to make round motifs and tear drops that do not have holes, get a percentage value of 100% which can be categorized as feasible. Point 8, regarding learning to make white embroidery obtained a percentage value of 96.87% which can be categorized as feasible. In general, the results of the validation of the white embroidery learning material presented in the white embroidery multimedia tutorial video show results that are eligible to be used as learning material.

Validation by a multimedia expert was the data shows that the white embroidery multimedia video tutorial obtained the results of validation from multimedia expert validators with an average value of 83.25% which can be categorized as suitable to be used as a multimedia learning tutorial video for making white embroidery. In a continuum the percentage of multimedia feasibility can be seen on the following scale 83.25%. Results of validation 2nd by a multimedia expert the data shows the average percentage results, namely 90.28% including the appropriate category used as multimedia learning with multimedia notes more interesting and clearer than the previous one (Woolfitt, 2015). As a continuum reference can be shown as follows 90.28%.

There are 5 points of evaluation aspects on the validation of white embroidered video tutorial multimedia, with the acquisition of each of the following values: Point 1, general appearance of the white embroidery tutorial multimedia video obtaining a score of 91.6% including the feasible category. Point 2, the display of multimedia videos in the presentation of white embroidery material obtained a value of 87.5% including the appropriate category. Point 3, the display of multimedia videos on the explanation of tools and materials received a score of 90% including the appropriate category. Point 4, the display of multimedia videos makes the design obtain a 90% value including the appropriate category and point 5, the display of multimedia tutorials on the making of white embroidery gets a score of 95% including the appropriate category. Judging from the acquisition of values in each aspect of the assessment generally get a decent category, so that the white

embroidery multimedia video tutorials can be categorized as feasible to be used as multimedia learning in the embroidery arts course (Nasrullah, 2014).

The data shows that the white embroidery multimedia video tutorials that have been tested on users obtain a validation value of 94.16% which can be categorized as feasible to be used as learning multimedia about making white embroidery in the embroidery art course. In continuum the percentage of the feasibility of using multimedia can be seen on the following scale 94.17%. Revision phase, this stage is done so that multimedia is made to be more communicative, interactive, and easy to understand in accordance with input from experts (Almara'beh, et. al., 2015). Based on the input given by the validators after validating the white embroidery multimedia video tutorial, there are several inputs and things that need to be improved include:

- a. Material expert: explanation in the theory section can be shortened to avoid saturation, bare stitches as motif edge fillers can be done using holbein stitches, so that the edge of the motif is stronger and more volume, the use of bandage on the teardrop motif that has a hole can be replaced with a fiddle stitch, ringgitan motives can be varied, and the use of torn or torn words can be replaced by tearing.
- b. Media expert: add text to video tools and materials as well as to the video making white embroidery, and about creator menu icon is made full animation.

4. Conclusion

Teaching media is a container of messages, the material to be conveyed is the message of learning and the goal to be achieved is the process of learning itself. In general the media has the benefit of clarifying the message so that it is not too verbalistic, overcoming the limitations of space, time, energy and sense power, giving rise to passion for learning, more direct interaction between students/students and learning resources. Is that the making of needy white embroidery tutorial multimedia is used in the learning process because it has a clear knowledge content, has an attractive and easily understood content and can be used in the white embroidery learning process.

References

- Almara'beh, H., Amer, E. F., and Sulieman, A. (2015). The Effectiveness of Multimedia Learning Tools in Education. *International Journal of Advanced Research in Computer Science and Software Engineering*, 5(12), 761-764.
- Brame, C. J. (2015). *Effective educational videos*. Retrieved from <http://cft.vanderbilt.edu/guides-sub-pages/effective-educational-videos>.
- Fahrurazi, S. K. (2017). The Development of Video Learning to Deliver a Basic Algorithm Learning. *Indonesian Journal of Informatics Education*, 1(2), 49-56.
- Kaewkiriya, T. (2013). A Design and Development of E-Learning Content for Multimedia Technology Using Multimedia Game. *International Journal of Software Engineering & Applications*, 4(6), 61-69.
- Molnar, A. (2017). Content type and perceived multimedia quality in mobile learning. *Multimedia Tools and Applications*, 76(20), 21613–21627.
- Ali, M. (2016). *Pengembangan Media Pembelajaran Berbasis Teknologi Informasi*. Retrieved from: <https://journal.uny.ac.id/index.php/jpakun/article/view/949>.
- Nasrullah. (2014). Role of Multimedia Tutorials in Distance Education. *International Journal for Infonomics*, 7(3), 933-941.

- Paiva, R. C., Ferreira, M.S., Mendes, A. G., and Eusébio, A. M. J. (2015). Interactive and Multimedia Contents Associated with a System for Computer-Aided Assessment Show less. *Journal of Educational Computing Research*. 52(2), 224-256.
- Rusman, and Riyana. C, (2011). Pembelajaran Berbasis Teknologi Informasidan Komunikasi: Mengembangkan Profesionalitas Guru. Jakarta: PT. Raja Grafindo Persada.
- Sousa, L. D., Richter, B. and Nel, C. (2017). The effect of multimedia use on the teaching and learning of Social Sciences at tertiary level: A case study. *Yesterday & Today*, 17, 1-22.
- Woolfitt, Z. (2015). *The effective use of video in higher education*. Inholland University of Applied Sciences. Retrieved from:<https://www.inholland.nl/media/10230/the-effective-use-of-video-in-higher-education-woolfitt-october-2015.pdf>.