

Development of Advanced Learning Technique of Pencak Silat Based Multimedia in FIK UNP

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ABSTRACT

This research aims to develop advanced learning techniques Pencak Silat with the design of multimedia technology application. The design of models developed through several phases include: (1) Digging for potential and problems, (2) data collection, (3) product design, (4) Design validation, (5) revision of the design, (6) Product trials, (7) Product revisions, (8) Trial use, (9) revision Products, and (10) mass production. Expert validation results 91.06% in qualifying very well with the caption not needing to be revised, for small scale trials is 92.7% in qualifying very well with captions not needing to be revised and trials on a large scale of 90.75% in qualifying Very good and need not be revised. The data used in this study is qualitative data derived from the interviews, criticism and advice from material experts, technology experts (IT) and media experts as constructive input materials for product revisions and quantitative data Obtained from polls, questionnaire and field observations.

Keywords: Advance learning, Multimedia

1. INTRODUCTION

The learning process in education is one of the most needed aspects of human life. Through the learning process can influence the development of each human's academic and non-academic skills in their lives. Learning is a process of interaction between learners and educators and learning resources in a learning environment. Learning is also an activity that involves a person in an effort to acquire knowledge, skills and positive values by utilizing various resources to learn. Through learning media, Learning Media is used as a means of teaching learning that aims to improve and learning activities are a support for the implementation of lecture activities that lead to the achievement of learning objectives are not adequate and not too much, therefore required the creativity of a lecturer to Develop Pencak Silat Learning media in the form of theory and practice in the form of multimedia technology application that leads to increased competence of pencak silat. In addition, the level of understanding of different students requires teachers to be creative in developing learning models.

Learning with the use of technology can be used with multimedia elements, including image media, text, audio, animation and video, so as to visualize the techniques of pencaksilat better. In addition, multimedia is also able to create something more vivid and interesting. Therefore, in a learning system is expected to follow the development of technology in the effort to

improve the quality and learning services especially the Pencak Silat in the future, hence the necessary improvement of quality and quantity Facilities and infrastructures with the creation of a learning media to support the process of martial learning.

According to Musfiqon (2012:28) Learning Media is a physical and nonphysical tool that is deliberately used as an intermediary between educators and students in understanding learning materials to be more effective and efficient. So that learning materials are faster to be received by students and attract students to learn more [1].

The purpose of this research is to produce application of multimedia technology in advanced techniques learning Pencak Silat that can help students learn independently and easily remember every movement in the process of Pencak Silat learning,

Multimedia technology is a technology that combines fully computer technology, video system and audio system to get a better combination and enhance interactions among users with computers. Frey (2010) expressed multimedia in learning to be integrated in learning when learning did not run effectively [2]. Literally multimedia means a variety of media. Multimedia as a computer that has the output tools as usual, namely display and hard copy tools with high-quality audio recordings, high-quality images, animations and video footage.

2. METHODS

A. Types of research

This type of research is research and development (research and Development). Research and development methods are research methods used to produce certain products, and to test product effectiveness.

B. Place and time of research

This research was conducted at FIK UNP which was held in August 2019.

C. Research subject

The subject in this study is a lecturer and students who follow the Pencak Silat lecture in the Department of Sports Science in UNP.

D. Research instruments

According to Sugiyono (2011:102) The instrument is a tool used to measure the natural or social phenomena observed [3]. The instrument for collecting data in this research and development is by using a poll or questionnaire. The instrument in this study uses a poll the respondent and is accompanied by advice from the respondent. Angket or Koesioner is given to students at the basic Pencak Silat Lecture in the Department of Sports Sciences Prodi Padang State University Sport.

E. Research design

According to Sugiyono (2008:289) in Nusa (2012:125) Research measures in research and development (research and development) consist of (1) Potential problems, (2) Information collection/data, (3) product design, (4) Design validation, (5) design improvements, (6) Product trials, (7) Product revisions, (8) Trial use, (9) Product revisions [3].

1. Potential problems

The use of technology in learning can be used with multimedia, including image media, text, audio, animation and video, so as to visualize the techniques of pencak silat well. In addition, multimedia is also able to create something more vivid and interesting. Thus, in the process of learning Pencak Silat is expected to follow the development of technology.

2. Data Collection Techniques

The technique of data collection used is an observation technique by conducting interviews with lecturers.

3. Product Design

In this research the product is produced in the form of modules, books and CDS in which it contains a learning model with multimedia applications as a guide to learning techniques of Pencak Silat martial arts.

4. Design validation

The next stage after product design is created is requesting the validation of experts or experts who have been competent. In this research validation is done by experts or experts who are competent with the aim to know the advantages or weaknesses of the product. Experts assess and provide input to the original product. Based on the input and criticism from the experts are done revision until the initial product deserves to be tested.

5. Revision of Design

The next step after the product is validated is product trials. On the implementation of the expert trials assess the weaknesses and advantages of the products made.

6. Trial Products

A small-scale trial is a field trial with fewer subject quantities. Small scale trials are useful for knowing the weaknesses and disadvantages of products. The small-scale trials of this study were conducted on students of 20 people.

7. Product Revision

The next step after a small-scale trial is a revision of the product made. The revision is based on the opinion and input of experts who aims to improve the product so that the test is worth doing on a larger scale.

8. Trial use

A large-scale trial is performed to determine if the resulting product can be used to a larger subject. In this study, large-scale trials were carried out by students with different courses with a small group trial, a total of 40 people. After the trial was conducted then seen the effectiveness of the product developed, so it is known the effectiveness of products.

9. Product Revisions

The next step after a large-scale trial is to fix a few things that are still considered lacking by experts. Repairs are done so that the resulting products are really worth being used by the wider community.

10. Production

The next step after the product made is considered worth being used is to do mass production. Product that resulted is ebooks and CD Learning guide Pencak silat with desktop-based multimedia applications. Expected products made easier for lecturers to acquire media learning for Pencak Silat courses.

F. Data Analysis Techniques

Data obtained will be divided into 2 parts is a qualitative data which is a suggestion and criticism by lecturers and students in the field Pencak Silat in the direction of the Department of the Sports Sciences Prodi Padang State University. Then the data of the poll is processed into quantitative data. The analytical technique used is a descriptive statistical analysis technique, used analyzing the scores given by experts and students to products obtained through the questionnaire. According to Tegeh and Kirna (2010:101), to calculate the percentage of each subject's calculated formula[4]:

Percentase:

$$\frac{\sum(\text{jawaban} \times \text{bobot tiap pilihan})}{n \times \text{bobot tertinggi}} \times 100\%$$

Description:

∑ = number

N = Sum of all poll items

Next to calculate the percentage of the whole subject used formula;

Percentage: F: N

Once the quantitative data obtained is sought the score is then converted into a qualitative descriptive data of five scales and finally described.

Table 1. Conversion rate achievement with scale 5

Achievement level (%)	Qualifications	Description
90-100	Excellent	No need to be revised
75-89	Good	Minor revision
65-74	Enough	Revised sufficiently
55-64	Less	Many hal yang direvisi
0-54	Very less	Repeated making products

(Tegeh and Kirna 2010:101)

3. RESULT AND DISCUSSION

Results

In the process of developing advanced learning techniques of Pencak Silat based multimedia, the product developed through the process of validation and testing. The validation phase in this study consisted of material validation by Pencak Silat and media validation by media experts, who are experts and experienced and able to provide appropriate inputs for improvement. Then conducted a trial process with students faculty of Sports Sciences University of Padang Negeri with the aim that the resulting products are worthy to be developed in the learning process.

Based on the results of a material expert validation assessment of products developed by the average percentage is:

1) Design Validation

The result of expert evaluation of material I on multimedia-based Learning media base development products is 89.3% with a good conclusion and a slight revision. Result of evaluation by material experts from advanced techniques Learning technique Pencak Silat There are some suggestions and revisions are added again the material about the advanced techniques Pencak Silat.

The results of the media expert evaluation of advanced learning technique based on multimedia application technology is 90.6% with very good description. In the evaluation of the stage I by the media experts given improvement advice, including the color of the letters less contrast, media experts also suggest the existence of music in the performance of double Pencak silat style, so it is interesting and does not look stiff.

The result of technology expert evaluation of Advanced Media development product learning techniques Pencak Silat based on multimedia is 88% with good description and little revision

Design revision

Evaluation at stage II is conducted to assess the initial product that has been revised stage I of the Advanced Media product learning techniques Pencak Silat based multimedia application technology. The steps performed are the same by providing a multimedia-based product application with an evaluation sheet or a questionnaire for material experts, media experts, and technologists who contain the quality aspects of learning materials, content, and presentation aspects (coloring, word usage in the language, display on the screen, animation and sound).

The result of expert evaluation of material I of advanced technical Learning product of Pencak Silat based multimedia technology application is 90.6% with conclusion is very good and worthy next to be used in learning Pencak Silat in the Faculty of Padang State University sports science without repairs and deserves to be tested.

The results of the media expert evaluation of the product development of advanced technical learning techniques Pencak Silat based multimedia technology application is 92% with a very good description and worthy of the next to be used in learning Pencak Silat in The Faculty of Sports Sciences of Padang State University means this product deserves to be tested.

Results of the evaluation of technology Experts (IT) on the Learning Media products Advanced Pencak Silat technology-based multimedia application is 90.6% with a very good description and the next deserve to be used

in learning Pencak Silat in The Faculty of Sports Sciences of Padang State University means this product deserves to be tested.

To calculate the average value of all the validator used formulas with calculations as follows:

$$\begin{aligned} \text{Persentase} & : \text{F:N} \\ \text{Keterangan} & : \text{F} = \text{Jumlah} \\ \text{Persentase Keseluruhan Subjek} & \\ & \text{N} = \text{Banyak} \\ & \text{Subjek} \end{aligned}$$

After the calculations with the above formula, the achievement level conversion is used with the 5 scale to determine the learning medium qualification.

Table 2. Conversion rate achievement with scale 5

Achievement level (%)	Qualifications	Description
90-100	Excellent	No need to be revised
75-89	Good	Minor revision
65-74	Enough	Revised sufficiently
55-64	Less	Many things are revised
0-54	Very less	Repeated making products

(Tegeh and Kirna 2010:101) [4]

The results of the validation of material experts, media experts, technology experts (IT) on multimedia-based advanced learning techniques Pencak Silat products in FIK UNP included in the qualifications of excellent category (91.06%) With a description can be used and worthy to be tested.

2) Product Trial

The small-scale trials of this study were conducted on students of 20 people. media products learning techniques Advanced Pencak Silat-based multimedia at the Faculty of Sports Sciences University of the Padang State is included in the qualifications very good (92.7%) With no description need to be revised.

3) Trial usage.

In this study, large-scale trials were conducted on students with a different course of study with a small group trial, a total of 40 people. After the trial was conducted then seen the effectiveness of the product developed, so it is known the effectiveness of products. Based on the results of a large-scale product trial of the media products learning techniques Advanced Pencak Silat based on multimedia in the Faculty of Sports Sciences University of the Padang is included in the qualifications very good (90.75%) With no description need to be revised.

4) Production

The next step after the product made is considered worth being used is to do mass production. The product that produced Media of modules, books and CD Learning guide Pencak silat with desktop-based multimedia applications. Expected products made easier for lecturers to acquire media learning for Pencak Silat courses.

B. The modification

The problem studied in research is to develop advanced learning techniques Pencak Silat based multimedia application. In the learning process, selecting the right media plays a role in improving learning outcomes. The type of media used must match the Learning plan to be taught. According to Asyhar (2012:44) "Although various types and formats of media have been developed and used in learning, but basically all the media can be grouped into four types, namely visual media, audio media, audio-visual media and Multimedia".

Learning Media that learners can use for self-learning is a learning CD (compact disk). Audio Media is a media that can only be heard like a radio, while audio-visual media is a media that can be seen and heard like movies and videos.

In this research media learning is developed with a multimedia-based application that is with a model of direct learning on the advanced techniques of Pencak Silat, including lockdown techniques, catches, drops and freelance designed with A combination of various media (Formatfiles) that are text, images (vectors or bitmaps), graphs, sound, animations, videos, interactions, etc. that have been packaged into digital files (computerised)..

4. CONCLUSION

Based on the results of the research, it can be concluded that: In general, this study resulted in a media product learning techniques Advanced Pencak Silat based multimedia in FIK UNP

5. REFERENCES

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