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## Development of interactive multimedia the subjects course of work

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### Abstract

The purpose of this research is to develop learning media by using interactive multimedia in the subject of the work skills basic skills of volleyball. Interactive multimedia is expected to help students physical education in the learning process so as to achieve the expected competence. The method used is research and development (R & D). Stages in this research: (1) The collection of information in the field (2) Conduct an analysis of the information gathered (3) Development of initial product (Draft Model) (4) Validation Expert (5) field trials and small-scale revision (6) Large scale field trial and revision (7) Final product making. The correspondent in this research is student of FKPI Unsri. The result of first stage validation from material experts was 68.3%, media expert obtained 59.3% percentage, and linguist obtained 69%, from the results of the three product drafters in the category is quite feasible for small-scale trial. Small-scale trials gained an average of 63, 8% can be categorized fairly decent. Validation of the results obtained from the second phase materials experts 71, 6%, 75% media experts and linguists 71.88% of the three experts included in the category of pretty decent. A large trial gained 83, 43% were category "Eligible". The result of this research is interactive multimedia in the form of flash media and user manual. Implications in this research that can be used as a medium of learning in the subjects work basic volleyball skills.

**Keywords:** Development, interactive multimedia, volleyball

### Introduction

SNPT by Permenristekdikti no 44 of 2015 consists of national education standards (8 standards), national standards of research, and national standards of service to the community so that all of the standard of 10. The development of learning process characteristic has been done by dosendan student of Faculty of Teacher Training and Education (FKIP) Sriwijaya University (Unsri) in the final research of the students in the form of minithesis, thesis, research report, and a number of articles on journals and proceedings. Course of work (MKB) is a compulsory subject in the study program in FKIP UNSRI PE containing special courses of education, health and sports.

The college courses include basic skills of the game of volleyball is one of the subjects held in Physical Education (PE) University of Sriwijaya. This course consists of credits that weighs 2 1 Credit 1 Credit theory and practice, which was held on semester 1. This course provides an understanding of science that covers the basic techniques in the game of volleyball among others passing down, passing above, below servicing, servicing over, smash and block, while tactics volleyball games students learn the techniques of defense and attack to apply learning volleyball school environment and implement a system of organizing matches, implementing organizational system game, apply the rules of the game so it can be primarily used as a competence to be a teacher, coach and referee.

The learning process is a basic skills in volleyball games PE for this is still many shortcomings and needs to be addressed. Lecturers is made his one-on-one source of information, so that students are less active and creative, learning methods used are still relatively monotonous and less use of learning media provided. Learning process that occurs less able to motivate, interesting, fun, and meaningful for students. This situation causes less lecture competence to be achieved.

Considering the above phenomenon, lecturers still need to be improved especially if associated with the demands of lecturers duties in the current era of globalization.

Utilizing advances in information technology and communications especially computer technology in learning activities are expected to help solve the problems faced learning. Election appropriate media is believed to help conveying the message correctly, effectively, efficiently, can create and enrich the learning experience, be able to present a picture of an event as near or as real as possible, and able to increase students' activity and skills.

Based on the above description, is intended to develop a model of instructional media through research and development in the course of learning the basic skills of volleyball games. Research and development is expected to result display the media in the form of interactive multimedia for basic skills courses volleyball effective. Multimedia is expected to help students in the learning process so as to achieve competence. Smaldino, Lowther, dan Russell (2008: 6) from basic media categories include "test, audio, visual, video, manipulatives, and people". Media can show assortment category said as multimedia, in addition according Gayestik in Sunaryo (2005: 2).<sup>[7]</sup> multimedia interpret as a computer-based interactive communication system capable menciptakan. Menyimpan, presenting and accessing return information such as text, graphics, sound, video or animasi. With computer technology it is now possible to store, manage and deliver back the source sound and video in digital format. Students can take advantage of the flash media interactive learning using a computer (laptop) is available in faculty or can also be used to study in each other's houses. Interactive multimedia is a multimedia equipped with a controller and can be operated by the user, so the user can choose what is desired for further processing (Daryanto, 2010: 52).

Use of the media is indispensable in teaching in universities tinggi. Utilization media is a creative and systematic efforts of a teacher to create learning experiences to university students. Sudarsono (2004: 6).<sup>[6]</sup> states that the primary role of media in education is first, serves to provide concrete experience to learners, secondly, serves as a means of communication and interaction between learners with the media, and with learning is an important learning resource. Benefits of media usage in learning there are some research results that show a positive impact on media consumption among others: the delivery of the lessons become more standardized, learning more interesting, learning more interactive, efficient time, the quality of teaching could be improved, the learning can be given anytime and anywhere.

The problem faced is the lack of learning media believed to be superior to implemented simultaneously. For that we need development media that correspond to existing courses in the study program to improve the understanding of the concepts and basic skills of volleyball PE student. The purpose of this research is produce instructional media such as interactive multimedia which can improve learning the basic skills of volleyball games in PE student.

### Research Methods

Research conducted using the method of research and development is often called (research and development). Borg and Gall (1983: 772) stated research and development is a research method to produce educational products, both products are in the form of material objects such as text books, and. Prosedur teaching films in the development of research in accordance with the development research steps by Borg and Gall. These steps are adapted into the following seven development plan development procedures (1) Collection of information in the field, (2) Analyzing the

information collected, (3) Development of the initial product (Draft Model), (4) Expert Validation, 5) Small and revised field trials, (6) Large-scale field trials and revisions, and (7) Final product creation

## Results And Discussion

### Results

Interactive multimedia development validated by experts in the field, which is a media expert, subject matter experts and linguists. In the first stage validation percentage of 68.3% thus obtained can be stated that according to subject matter experts, on the first validation phase of the development of interactive multimedia learning volleyball than men get the material aspects of the category "quite feasible", media experts got a percentage of 59.3% with thus included in the category of "good enough". Linguists obtained by percentage of 69% and is therefore stated that the development of interactive multimedia learning of aspects of language volleyball get the category of "good enough". The pilot phase of small-scale products, h acyl of small-scale trial on the development of interactive multimedia in the course of work a volleyball game that is 63.8% which is the average result of 25 respondents were tested. The results of 63 trials, 8% in the category of "good enough". Second stage expert validation by subject matter experts obtained by percentage of 71.6% to the category of "good enough". Media experts obtained a percentage of 75% and is therefore in the category of "good enough". Linguists obtained by percentage of 71.88% and is therefore in the category of "pretty laya k". The next stage that results from large-scale trials of interactive multimedia development in the course of work a game of volleyball that is 83, 43% which is the average result of 55 respondents were tested. The results of large-scale trials 83, 43% included in the category of "eligible" to be used as an interactive multimedia.

### Discussion

This interactive multimedia development research is carried out through steps starting from needs analysis, information gathering, product design, expert validation, small-scale testing, early product revision, second stage expert validation, large-scale testing, product revision phase end and end interactive multimedia products. Expert validation step is done by two stages. The first step is used as the basis as a researcher to revise the existing deficiencies in interactive multimedia developed. The initial step of this research begins with the validation of experts in the field of interactive multimedia development research.

Validation of the first phase of the poll results show the percentage of material experts at 68, 3%, which means that the game of volleyball that is in the interactive multimedia is enough to use for multimedia relevance because they are in the category of "good enough". By being in the category of good enough the initial draft of the interactive multimedia product is quite feasible said multimedia products that can be passed on to the next stage of small-scale trials. In the second stage validation percentage of 71.6% thus obtained can be stated that according to subject matter experts, on the validation phase two development of interactive multimedia learning aspect volleyball volleyball men get the category of "good enough" to be continued on a large scale pilot phase. Media expert validation stages one and two, validation of the first phase of expert media poll result showed a percentage of 59.3%, which means that the media are in the interactive multimedia is enough to use for multimedia relevance because

they are in the category of "good enough". By being in the category is quite feasible then the initial draft interactive multimedia products are already quite feasible to say multimedia products so that can be forwarded in the next stage of small-scale test. In the second validation phase 75% the percentage obtained can thus be stated that according to media experts, the second validation phase development of interactive multimedia learning volleyball of aspects of the media to get the category of "good enough" so do large-scale trials.

Validation linguists first and second stages, p is no validation of the first phase of the poll result of linguists showed a percentage of 69%, which means that the language is in interactive multimedia is good enough to use for multimedia as fallow da in the category "good enough" so that it can a small-scale trial was conducted. In the second stage validation percentage of 71.88% thus obtained can be stated that according to linguists, the development of interactive multimedia learning volleyball on aspects of language that are in the category of "good enough, so it can be passed on a large scale trials.

#### Small Scale Trials and Large Scale Trial

Small-scale trials were conducted on FKIP UNSRI PE students totaling 25 people. The results of the small-scale trial on the development of interactive multimedia in the course of work a volleyball game that is 63.8% which is the average result of 25 respondents were tested. The results of 63 trials, 8% included in the category of "good enough" to be continued at a later stage. On a large scale pilot trial results of a large-scale interactive multimedia development in the course of work a game of volleyball that is 83, 43% which is the average result of 55 respondents were tested. The results of large-scale trials 83, 43% included in the category of "eligible" to be used as an interactive multimedia. Interactive multimedia learning work, especially volleyball learning can be said to be a product of interactive multimedia development.

#### Product Revision

The revision of this product is done in accordance with the input given by the validator both in the first and second stage validation, in addition to the revision also see the results of small and large scale test, so that all the deficiencies of the multimedia can be improved. With the revision of the product after the test phase then the interactive multimedia development products are said to be worthy of an interactive multimedia volleyball products that can be used as a medium in learning volleyball course work.

#### Advantages and Disadvantages of Products

After going through product trials (small-scale, large-scale testing) it can be described the advantages and disadvantages of the study "Development of Model multim edia Interactive core subjects Work on Students PE FKIP UNSRI" as follows: (1) Make the latest media in learning volleyball namely in the form of interactive multimedia adobe flash (2) Multimedia interactive game of volleyball is very varied (3) Multimedia effective and efficient in making learning more meaningful learning (4) Multimedia that any practical use in pembelajar an. (5) a more attractive Multimedia (6) I nteraktif, students are invited to get involved in auditory, visual and kinetic information is easy to understand so that it is possible in line with the opinions dikemukakan Yuhdi Munadi (2013: 152-153) that students are encouraged to engage auditory, visual and kinetic so it is possible the information easy to understand. (7) Provide experience multisensorik, which can be used of teaching, improvement, or basic enrichment (8) Increase

motivation and participation of students in learning volleyball excess is also in line with the opinion of Deni Darmawan (2012: 55-56).<sup>[2]</sup> Is able to enable students to learn with high motivation because of his interest in multimedia systems capable of presenting text, images, video, sound, and animation.

As for the shortage of interactive multimedia volleyball games are (1) There does effectiveness test because of time constraints research so interactive multimedia volleyball game this should be continued at a later stage, (2) Copyright programs that lead to program interactive multimedia not all inaccessible freely (3) media format that is in conformity with the linux operating system but can not be uploaded into the system so the program must int ernet copy one by one in flashdish or laptop during the experiment both small scale and large scale.

#### Conclusion

Based on the research and development conducted found in the form of interactive multimedia flash media for work skills courses basic skills of volleyball. Products produced in the form of flash media can be used for learning in the subject of the basic skills of volleyball. Products that have been developed can be used based on the results of expert validation that are in decent enough percentage to use and test products with a percentage of 83, 43% so that it can be feasible as the product. The implication of this development is that interactive multimedia in the form of flash media is expected to improve student learning outcomes on the subjects of basic volleyball.

#### Suggestion

For researchers selajutnya expected (1) to test the effectiveness so that it can be seen how much of an increase in proceeds learned to after using the media (2) Interactive multimedia is expected to be used as teaching materials in order to improve the competence of learners (3) for laptops are expected to use a large RAM so that multimedia can be operated optimally.

#### Reference

1. Borg WR, Gall MD. Educational Research An Introduction. New York:Longman., 1983.
2. Deni Darmawan. Inovasi Pendidikan. Bandung: PT Remaja Rosdakarya, 2012.
3. Suyanto M. Multimedia : Alat untuk meningkatkan keunggulan bersaing. Yogyakarta : CV. Andi Offset, 2005.
4. Permenriste kdikti No 44 Tahun 2015 tentang Standar Nasional Pendidikan Tinggi.
5. Smaldino Sharon E, Lowther Deborah L, Russel James D. Instructional Technology and Media for Learning (Ninth Edition). NJ: Pearson Education Inc, 2008.
6. Sudarsono Sudarsono. Sudirdjo dan Evelin Siregar. (2004) Media Pembelajaran Sebagai Pilihan dalam Strategi Pembelajaran. Dimuat dalam Mozaik Teknologi Pendidikan, diedit oleh Dewi Salma P. & eveline S. Jakarta: Prenada Media, 2004, 6.
7. Sunaryo Soenarto. Pengembangan Multimedia Pembelajaran Interkatif. Makalahdisampaikan pada Pelatihan Model Pembelajaran KBK, DPN P3AI UNY, tangga NBN,MNI, 2005.
8. Yuhdi Munadi. Media Pembelajaran, Sebuah Pendekatan Baru. Jakarta: REFERENSI (GP Press Group), 2013.