

Development of E-Modules with Tutorial Models in Sports Massage Courses, Department of PJKR FIK UNIMED

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Abstract. The purpose of this research is to produce a valid E-Module product with a Tutorial Model in Sport Massage Course, Physical education, Health, and Recreation (PJKR) Department, faculty of Sport Science (FIK) State University Of Medan (UNIMED). and test the effectiveness of E-Module products. Research with RnD with ADDIE development. The sample is class A Regular 2020 around 30 students. Data collection techniques used observation, interviews, questionnaires and documentation. The data obtained then the researchers analyzed qualitatively and quantitatively. Based on the results of this development research, the following conclusions can be drawn. The total average validation of the E-Module with the Tutorial Model in the Massage Sports Course of the PJKR Department is 80.5%. By referring to these criteria, it can be concluded that the E-Module with Tutorial Model in the Massage Sports Course of the PJKR that was developed meets the validity criteria in the "valid" category.

Keywords: e-Modules; Tutorial Models; Sport Massage Courses

1 Introduction

Education is a conscious effort made by individuals to develop the abilities or potentials that exist within themselves, both from within and outside the school. It aims to build the Indonesian nation to be more advanced and develop in the future. Education can be held through certain stages, according to what we want to achieve. As with lectures which is an advanced learning process and is something that is very desirable for everyone. In lectures there are several majors that will guide us to move forward toward what we want.

Related to the explanation above, Medan State University has several faculties of education, one of which is a faculty that helps us to understand more about sports science, namely the Faculty of Sports Science. RI Law Number 3 of 2005 concerning the National Sports System chapter 1 article 1 that, "Sports are all aspects related to sports that require regulation, education, training, coaching, development, and supervision". As explained by Luwistiana and Sumiyatun [1] the subject is an educational science that is basically related to the material or general basic sciences of education as a provision for prospective teachers (educators), in which it is related to methods and models of learning.

The curriculum structure at the Faculty of Sports Science contains both theoretical and

practical courses, one of which is sports massage. As explained in the Medan State University (UNIMED) Manual of the Faculty of Sports Science (FIK), the sports massage course is a conditional course, before students program this course, they must first pass anatomy and exercise physiology courses. The learning achievement of the sports massage course is that students are able to master the history of massage, understand and master the professional ethics of a masseur, and master massage manipulation techniques.

As described by Purnomo [2], what is clear is that sports massage begins at the same time as the birth of humans themselves. This is marked by the presence of pictures of ancient relics on ancient walls or ancient books related to medicine. Sports massage itself is a complex manipulating movement with several manipulations using the hands of athletes who experience a healthy physical condition and a relaxed state, with the aim of improving and warming up the body condition and accelerating the healing of injuries experienced by athletes [3]. Standard sports massage is carried out for 10 minutes on certain muscles and is carried out by someone who has been in the field of sports massage [4].

Sports massage has benefits for the health of the body, one of which makes the muscles of the body relax and accelerates blood circulation. Sports massage can also reduce lactic acid and reduce fatigue in the body, not only for muscles and nervous tissue, but sports massage is also beneficial for joints, namely to relax joint binding tissue and prepare supporting muscles that are arranged in joints in the body [5].

Besides, the massage course is a course that equips students with life skills with the aim of opening up opportunities to be independent in society. Thus alumni of the Department of Sports Education, Faculty of Sports Science, State University of Medan are not only prepared to work or serve in the formal sector such as civil servants, but also can open new business opportunities independently. Explained by Balogun and Kennedy [6], this aims to expand the diversity of the profession, one of which is sports massage which is used as a natural medicine.

Based on the results of observations and interviews with students from the class of 2020, Department of Sports Education, Faculty of Sports Science, UNIMED very few of them are motivated and able to practice massage skills obtained from sports massage courses. This is due to the lack of student understanding of the human body tissue, the lack of students' ability to master the manipulation of sports massage, the lack of motivation to learn, and the lack of exercise carried out by students either outside or at home, the assumption or perception that they look down on sports massage skills and the profession as a massager. has not been fully utilized in various sports. Leuciuc [7] argues, "to get perceptions from students it is necessary to use a questionnaire" from the questionnaire, it will be known the positive or negative responses that students will give.

There are many factors that can support the achievement of the learning objectives, such as mastery of the material by lecturers, methods and learning strategies, completeness of facilities and the effectiveness of using learning facilities that are still less than optimal, especially in the Sport Massage course. The development of media in the learning process is one of the efforts to improve the quality of the learning process, which in turn can improve the quality of student learning outcomes [8]. The computer software used in the development of this learning media is an online-based Portable Document Format (Electronic Module/E-Module). This program can display information in the form of sports massage material, practical steps for sports massage, and pictures of massage movements, which are online or published online so that students can be more interested in taking massage courses. With the e-module model, students will be guided to learn, train and directly practice Sports Massage

activities in the classroom and outside the classroom.

Therefore, the authors conducted research with the aim of producing an E-Module product with a Tutorial Model on a valid Sports Massage Course and testing the effectiveness of the E-Module product. In this case it has been explained by Akib Implementation is a general process of administrative action that can be investigated at a certain program level, the implementation process will only start when the goals and objectives have been set. This research was conducted on students of the Department of Sports Education class of 2020 [9].

2 Method

The research development design consists of a 10-step Borg & Gall development model (Citrawati et al., 2018) These ten steps can be seen in Figure 1

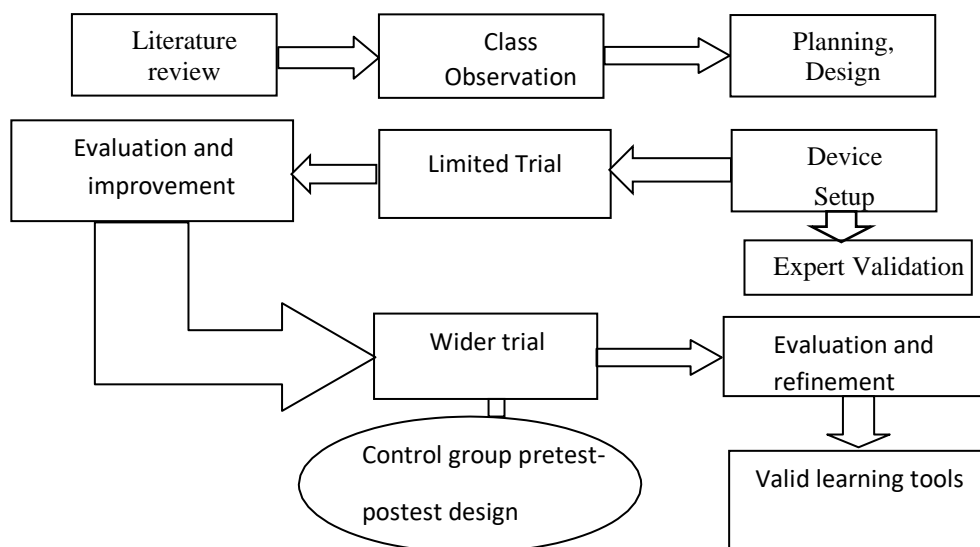


Figure 1. Borg & Gall Development Research Design [10]

Research on the development of an E-Module product with a Tutorial Model in the Sport Massage Course in the Department of PJKR FIK UNIMED uses the ADDIE model. The ADDIE model consists of 5 interrelated components and is structured systematically, which means that from the first stage to the fifth stage in its application it must be systematically and cannot be ordered randomly. The following are the research steps using the ADDIE model

Analysis

The initial stage of developing an E-Module product with a Tutorial Model is carried out with several analyzes including problem analysis and analysis of student needs.

Design

The design of the E-Module product is based on observational data at the analysis stage. So the design was developed using the Tutorial Model. This stage also determines the material and learning flow that will be arranged in an E-Module with a Tutorial Model in the Sports Massage Course, Department of PJKR FIK UNIMED.

Development

The development of the E-Module is carried out in several stages including the feasibility test of teaching materials by design experts to assess aspects of presentation, language aspects, and practicality of teaching materials, material experts to assess the feasibility of materials in E-Modules with Tutorial Models in the Sports Massage Course, FIK PJKR Department. UNIMED.

Implementation

The activities carried out in the implementation phase are introducing and using E-Modules with Tutorial Models in the Sport Massage Course of the PJKR FIK UNIMED Department in lecture activities.

Evaluation

The final stage in this study aims to measure the quality of the E-Module product with the Tutorial Model in the Sports Massage Course, Department of PJKR FIK UNIMED and the process from before and after the implementation of the activity.

The research was conducted in Class A Regular 2020, which consisted of 30 students. Data collection techniques in this study used observation, interviews, questionnaires and documentation. The data collection instruments in this study were learning device validation sheets, learning implementation observation sheets, learning interest questionnaire results sheets after learning, and pretest and posttest sheets of reasoning abilities and mastery of concepts. Data analysis techniques for the feasibility of the learning tools developed were assessed by three. The assessment of the implementation of the teaching syntax phases using learning tools is carried out by three observers who have been trained so that they can operate the observation sheet correctly. The three observers are permanent lecturers at FIK, Medan State University.

For assessment tools, in addition to being validated in theory, they must also be empirically validated. Empirical validation consists of item validity and reliability. Field test analysis consisted of normality tests, difference tests, improvement index, and questionnaire data. Test the normality of the data using the Chi-square test [11]. Test the difference between the experimental class and the control class using the two-sample Kolmogorov-Smirnov test [12]. The index of increasing the results of the reasoning test and concept mastery test is calculated using the gain score formula [13]

3 Results and Discussion

This research uses research and development methods or often called Research and Development (R&D). Research and development is a research method to develop and test products in the world of education. In addition to developing and testing products, this research is used to discover new knowledge regarding fundamental phenomena, as well as educational practices. The results of the research activity "Development of E-Modules with Tutorial Models in the Sport Massage Course, Department of PJKR FIK UNIMED" are described below based on the results of the analysis of research activities.

The results of the validation and revision of the learning tools: The assessment carried out by the validator includes the feasibility of content, presentation of material, appearance and language. In making revisions, the researcher refers to the results of the discussion by following the suggestions and instructions of the validator. The following are the results of the material expert validator for the E-Module with the Tutorial Model in the Sports Massage Course of the PJKR Department as follows:

Table 1 Results Of Expert Validation Of E-Module Materials With Tutorial Model In Sport massage Course Department of PJKR

Criteria	Number	Total Score	Score	Classification
Material Load	1,2,3	15	10	worthy
Material Presentation	4,5,6,7	20	12	worthy
Language	8,9,10	15	12	worthy
Total		50	34	68 %

The following are the results of the media expert validator for the E-Module with the Tutorial Model in the Sports Massage Course of the PJKR Department as follows

Table 2 Results Of Validation Of E-Module Media Expert With Tutorial Model In Sports Massage Course Department of PJKR

Criteria	Number	Total Score	Score	Classification
Content	1,2,3	15	15	So worth it
Design	4,5,6,7,8,9,10,11	55	48	worthy
Presentation	2,13,14 15,16	10	10	So worth it
Language	17,18,19,20	20	20	So worth it
Total		100	93	93%

Based on the results of the two types of validators, conclusions are obtained according to the table below:

Table 3 Media Expert And Material Expert Validation Result

No.	Validator	Score	Category
1	Material expert	68	Worthy
2	Media Expert	93	So worth it
	Total	161	
	Average	80,5%	
	Category	Worthy	

Based on table 3, it is obtained that the total average for the validation of E-Modules with Tutorial Models in the Sport Massage Course of the PJKR Department is 80.5%. By referring to these criteria, it can be concluded that the E-Module with Tutorial Model in the Sports Massage Course of the PJKR Department that was developed meets the criteria for validity in the "valid" category. Furthermore, the product that has been validated is tested on

students as a plan for the next activity

Based on the research of Atmosphere and Mahayukti [14] found that e-modules can improve students' critical thinking skills and get a positive response from students. This attracts interest and response for students as well as demands for lecturers in preparing learning using e-modules.

The e-module is implemented using a tutorial model. The tutorial model really requires students to master the material completely, so that before each segment of the material is mastered they cannot move on to the next material. The tutorial contains: objectives, materials, and evaluation, the purpose of the tutorial is to provide "satisfaction" or complete understanding (mastery learning) to students regarding the lecture material being studied

The e-module developed is based on the Sport Massage course, where through the results of the questionnaire analysis that has been filled in by the respondents, most of them think that sports massage is a very good skill and is useful for us because it can overcome activity fatigue and improve physical fitness so that students Programming sports massage courses is not only for academic demands, but also proficient in practicing sports massage is also the desire of the students themselves.

This is reinforced by the theory, according to Roepajadi [15], sports massage is a pressing movement, massaging or kneeling certain parts by using hands or special tools with the aim of improving blood circulation and eliminating significant fatigue. The implementation of massage requires someone who has mastered the anatomy of the body and also the physiology of exercise, masseur as a designation (male) masseuse as a designation (female).

Strickland [16] states, "Qualities of an individual's motivation are shaped during all stages of childhood". These qualities of an individual's motivation are shaped during the childhood stage. Habits and examples that are instilled in childhood will shape the quality of individuals in the future. In line with the opinion above, Schere stated, "Parents and teachers together are powerful vehicles for driving the moral growth of adults and students". Parents and teachers together are a powerful vehicle for encouraging the moral growth of adults and students. Parents and teachers have a strong role in the moral growth of children [17].

The modeling concept is also supported by way of the twin coding principle proposed by means of Paivio, namely that statistics received by means of college students is in visual shape and blended with facts in a visual shape packaged in mastering media can guide college students' memory and know-how of the fabric so that studying will become extra powerful. The function of e-module has succeeded in providing a psychological function that can motivate students. This can be seen from the increase in the average score of student learning motivation before and after using e-module [18].

The presentation of interesting learning and involving students in fantasy and imitation situations (fictitious characters) is the basis for the development of E-Module. Tutorial Model in which there are fantasies describing various imitation situations so that students become interested. Kim stated, "Tutorial model might be more attractive and motivating" [19]. The model might be more interesting and motivating. From various studies and research that have been carried out using e-module, it is found that the use of e-module for the material "Traditional Games" can increase students' learning motivation and the character of the hard work of fifth-grade students.

4 Conclusion

Based on the results of this development research, the following conclusions can be drawn. First, the total average for validation of the E-Module with the Tutorial Model in the Sports Massage Course of the PJKR Department is 80.5%. By referring to these criteria, it can be concluded that the E-Module with Tutorial Model in the Sports Massage Course of the PJKR Department that was developed meets the criteria for validity in the "valid" category. Furthermore, the product that has been validated is tested on students as a plan for the next activity

The development of e-module to increase learning motivation and the hard work character of student has been tested for its feasibility and effectiveness. Therefore, it is recommended for teachers to use e-module as an alternative media in learning and similar module can be developed further for different materials

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