

**THE IMPACT OF STRUCTURED DESIGNED MULTIMEDIA AND
COMMERCIAL LEARNING MEDIA TOWARDS THE LEARNING
OUTCOMES OF STUDENT WHO HAVE LOW MOTOR ABILITY IN
LEARNING BREASTROKE SWIMMINNG TECHNIQUE**

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Abstract

The use of multimedia in learning is considered very important, because it will make the lessons more interesting and meaningful. Multimedia can present information or learning material in the form of an interesting, varied, fun, easy to understand and clear, thereby reducing misunderstanding or wrong concept. The research objective is to explore the influence of the structured designed multimedia learning media with a commercial learning media towards the learning outcomes of students who have low level motor ability in learning breaststroke swimming technique. The population was 44 students of Department of Physical Education FIK UNP. Prior to sampling, a test was conducted towards variable attributes of motor abilities. Furthermore, score was ordered from lowest to the highest, then searched the median which is: 50% of the groups stated as above high scores, and 50% of motor ability is called as down low. So the study sample was 22 students who have the low motor ability low. Data collection technique using test and measurement of learning outcomes of breaststroke swimming technique. The collected data were analyzed using a computerized using *t-test* with significant level of $p < 0.05$. The results of the data analysis shows that the structured designed multimedia and commercial learning media affect the learning outcomes of students who have low motor ability in learning breaststroke swimming technique. The results showed an average score of learning outcomes of students who have low motor ability in learning breaststroke swimming technique who are taught by structured designed media is higher than students who are taught by the commercial learning media that available in the market, which are 366.45 and 309.27.

Keywords: multimedia, low motor ability

Introduction

Education is a conscious effort that is useful to realize the effective learning process in order to develop the potential of students that lasts a lifetime. Basically, the purpose of education in Indonesia is increasing the Human Resources (HR) to be able to be a national asset that has the expertise, professional, productive and self-sufficient to face the global competition. The role of government in education is critical to improving the quality of human resources. Hence, there was born a national development goal is to build quality human resources fully. Fully Indonesian is a physically and mentally healthy human being. This is in line with the purpose of sports is to educate, establish a healthy body and a fresh order in which to grow a healthy soul.

In the Law of the Republic of Indonesia No. 3 of 2005 on National Sports System Chapter: I chapter 1 verse 11 says that sports education: Physical education and sport are implemented as part of the regular process and continuing education to acquire knowledge, personality, skills, health, and physical fitness.

Implementation of the current educational exercise refers Education Unit Level Curriculum by way of translation and adaptation of content standards and competency standards

established by Decree No. 23 of 2006. The scope of Physical Education, Sport and Health in SMA / MA is covering several aspects of the subjects of Physical Education Sport and Health, one of which is included in teaching Aquatics swimming.

Swimming sport education is part of the curriculum in physical education lessons and sports health. Demands to be achieved in the curriculum is to demonstrate the basic techniques of swimming stroke is based on the right concept and values contained in them with the main subject freestyle, breaststroke, backstroke and butterfly. Swimming lessons is part of water activities subjects (aquatic), and is currently administered intra-curricular and extra-curricular. But in reality there are many graduate high school students, or vocational school can not swim even though they had swimming lessons. The cause of the inability of the students to master or be able to swim due to many factors such as limited facilities and infrastructure in this country, in addition to the ability of the instructors or teachers in schools. Those who go to the university, such as to the Faculty of Physical Science of Padang State University (FIK UNP) still many who can not swim well. There were only about 20% of new students of FIK UNP. They can swim because they exercise in the clubs or their residence is located close to water, such as beaches, lakes and rivers.

This fact is certainly an issue in sport education in Indonesia because the physical education curriculum in schools swimming lessons must be conducted in writing from elementary through to high school. Learning aquatic demands even more broadly, that the child can master all water sports activities, such as beautiful swimming, diving, water polo, and others.

During his education, FIK UNP students acquire manifold theory and practice courses, so that they become professional educators in their field after completing education. One of the compulsory subjects for all students who study at FIK UNP is swimming. Swimming courses are always provided in each semester, both semesters from January to June, or July to December. Swimming learning objectives are: "An understanding of ideas, history, organization, techniques and rules of the game, methodical didactic, exercises referring to the swimming motion control techniques and the development of motor abilities to swim freestyle and breaststroke and teach them". (Manual Academic of Padang State University, 2012).

Based on the information and the survey that has been done in the field, based on data from lecturers who taught courses in the department of physical education swimming FIK UNP and of the Computer Center UNP, the number of students taking swimming classes in semester from July to December 2012 is 178 people. Of the 178 students, 16 students got grade E score, 10 students got grade C, 115 students grade B, and 37 students got grade A. No graduation of students in a course swimming can be caused by various factors, such as low motor ability, not adequate facilities and infrastructure, and also learning strategies were not appropriate enough. Of some of the above factors researcher makes improvement on learning strategies in an effort to improve student learning outcomes.

Learning is a process of self-change in student behavior. To achieve such a state the learning strategies should be selected to provide the freedom of students in participating in learning. According to Dick and Carey (2001), learning strategies as well as sort and organize aspects of the learning material and make decisions about how to present the subject matter and learning activities. Learning activities include the following: presentation of the material, giving an example, the provision of training, as well as providing feedback. In order to achieve the optimum learning objectives all the learning activities should be set by considering the characteristics of the students, the media, and the circumstances surrounding the learning process.

The success of the learning process that depends on a variety of components that constitute an integral and mutually assist in achieving this goal. This is described by Roestiyah (1994) "The components of the learning process are: 1) The purpose of learning, 2) The subject

matter , 3) teaching methods, 4) learning resources, 5) media for learning, 6) management of teaching and learning interaction, 7) Evaluation, 8) Students, 9) Teachers, and 10) the development of teaching and learning.

To improve student learning outcomes at the swimming course, need to be improved learning strategies, one of which is the use of instructional media. Sadiman (1990) suggested instructional media plays an important role in the learning process. In a learning process, there are two very important elements which is the method of teaching and learning media. Both of these aspects are interrelated. The selection of one particular teaching method will affect the type of media that suit, although there are various other aspects that must be considered in choosing the media, including learning objectives, the type of task and the expected response from the students who have mastered after learning takes place, and context including learning characteristics of learners.

Learning media can replace the role of the teacher. Besides, learning media can enhance the effectiveness and efficiency in teaching. Therefore the use of instructional media should be adapted to the purpose and content of teaching. Educational experts suggest that in the implementation of the learning process the teacher should use the complete media appropriately. Accordingly, the multimedia is the best option to reach that goal.

Nasution (2000) suggested that learning media using computer (multimedia) has many advantages, because of its ability to be used in learning / instructional, with the speed control of matter that can be regulated solely by the wearer. Besides, the computer can be equipped again to expand its function, for example with tape recorder, earphones, and a slide projector for movies, television screens and keyboard, thus can be used as learning machine or teaching machine.

Multimedia can provide examples of the right contextual framework, thus allowing learning by discovery, cooperative, collaborative and constructive. Multimedia is also able to act as a cognitive tool to create learning, critical and creative thinking, problem solving and independent learning (Sharifuddin, 1999).

Appropriate learning media will be very helpful in assisting students to understand the swimming motion. The attractive media for swimming course during this time is not available. Lecturers who use the learning media in swimming lessons, utilized the students made media as part of an assignment in swimming course. The media is certainly less attractive.

Therefore, the attractive learning media needs to be made. On this study has been produced structured designed media (multimedia) for the swimming course. Furthermore this media have tested on the UNP FIK students who takes swimming courses and has a low motor ability.

The research hypothesis is learning outcomes of the breaststroke swimming techniques of the students who have low motor ability taught using a structured designed media is higher than students who are taught by the commercial media available on the market.

Research Methods

a. Type of research.

This type of research is a field experiment with *randomized pretest-posttest design*.

b. Population and Sample

The study population is the male students of Department of Physical Education FIK UNP who took basic swimming courses on half of January to June 2013, which amounted to 44 people. Samples were taken at random, and obtained a sample of 22 students who have the low

motor ability. The students were divided into 2 groups: the group that was taught using a structured designed media and group taught using commercial media.

c. Data Collection Techniques

Scores of breaststroke swimming technique learning outcomes derived from the total score of the test results of breaststroke swimming technique of students learning breaststroke swimming using structured designed multimedia and a group of students learning breaststroke swimming using commercial multimedia. Criteria for measuring learning outcomes breaststroke swimming techniques include: posture, hand movements, leg movements, breathing and coordination. Instruments achievement test execution breaststroke swimming technique aims to find the success that follows a group of students learning.

To reveal the score of learning outcome of breaststroke swimming technique, tests were performed by making test grating by following description of breaststroke swimming technique as stated by Maglischo (1993).

d. Data Analysis Technique

Data analysis technique is done by analyzing the differences of two average scores on groups of students learning breaststroke swimming using structured designed multimedia and a group of students learning using a commercial media.

Result and Discussion

Based on the research that was conducted towards two groups of students who learn swimming course using different learning media researcher obtained a summary of the mean scores and standard deviations of learning outcomes as presented in Table 1.

On Table 1 shows that the mean score of breaststroke swimming technique

Group	N	Mean	Standard Deviation
Students using structured designed multimedia media and have low motor ability	11	366.45	9.23
Students use commercial multimedia and have low motor ability	11	309.27	9.16

Students score of the group using structured designed multimedia is higher than the average score of group of student learning using a commercial media. A group of students using structured designed multimedia had a mean score of 366.45. Meanwhile, a group of students using a commercial media had a mean score of 309.27.

Furthermore, the data were analyzed using t-test. The results of the t test can be seen Table 2.

Table 2. Hypothetical test using t test

Group	t	t _{table}	Conclusion
Students using structured designed multimedia media and have low motor ability	35.387	2,086	The hypothesis is accepted
Students use commercial multimedia and have low motor ability			

From the t test results obtained that $t = 35.387$ and $t_{table} = 2.086$. When compared between t_{count} and t_{table} , then $t_{count} > t_{table}$. It means hypothesis is accepted, i.e. there is a difference in the significant level of $\alpha 0.05$ between learning outcomes of group of students learning breaststroke swimming technique who are taught using structured designed multimedia

and the learning outcomes of group of students learning breaststroke swimming techniques who are taught using commercial media.

Furthermore, the mean score of learning breaststroke swimming technique of the group of students taught using structured designed multimedia is 366.45 while the group of students who are taught by a commercial media is 309.27 or $366.45 > 309.27$. It can be concluded that the group of students who have low motor ability have a higher learning outcomes when taught using structured designed multimedia compared to commercial media.

Structured designed multimedia can help students to learn the techniques of breaststroke swimming independently, according to desire and needs. Besides, the media have been prepared in accordance with the structured learning objectives that have been set. Saguni (2006) stated multimedia provide an opportunity to learn not only from a single source such as teacher learning, but also provides the opportunity for subjects to develop better cognitive, creative and innovative. In addition, Karsa (2001) suggested by using multimedia time to learn is shorter compared with non-multimedia which is 16% versus 37%.

CONCLUSION

Based on the results of research and discussion, it can be concluded that there are differences in learning outcomes of students learning breaststroke swimming technique with significant level of α 0.05 between groups of students who are taught using structured designed multimedia which have mean score of 366.45 with learning outcomes of the group of students taught using commercial media, where the mean score is 309.27. It can be concluded that the group of students that have low motor ability have a higher outcomes if taught using structured designed multimedia compared to commercial media.

ADVICE

From these results it is advisable to use a media that is designed in a structured multimedia in learning breaststroke swimming. The further research needs to be conducted on female students.

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