EFFECTIVENESS THEORY AND PRACTICE MODEL SWIMMING

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Abstract
Theoretical understanding and practice in swimming learning still cannot be integrated scientifically in student learning. So it is necessary to have a theoretical and training model to improve swimming ability. The aim is to find out how effective the theoretical and exercise models are designed for experiments on 75 students. The experimental method used the control group and the experimental group. Theory and practice used online and face-to-face learning with an analysis of the results of the t-test starting with the pre-test and ending with the post-test. The results showed that there was a significant difference between the experimental group and the control group with scorest-test for Equality of Means. From this column, the value of t count = 3.638, df = 58, so the table = 2.002 is obtained. When compared, the value of t count > t table and sig (2 tailed) or p-value = 0.001 <0.05 or H0 is rejected. Even with sometimes limitations to the use of technology such as the need for maintenance and loss of connectivity, teaching online (web-based) nevertheless empowers students and maximizes their learning. Students in the study reported their liking for being able to proceed at their own pace

***Keywords:**Online Learning; Theory and Practice; swimming; Freestyle*

INTRODUCTION

Media as a source of learning, is an important component in the learning model that will help and stimulate students to learn. According to Arsyad,

(2011)learning media is anything that can be used to convey messages or information in the teaching and learning process(Das & Das, 2015) so that it can stimulate students' attention.   According to Efendi et al., (2020), learning media is anything that can be used to channel messages from the sender to the recipient so that it can stimulate the thoughts, feelings, and competencies and attention of students in such a way that the learning process occurs. (Suyanto & Jihad, 2013) said, in order to facilitate the achievement of the goals of implementing education in schools, an intermediary media is needed that can be used to channel messages, stimulate thoughts, feelings,

Furthermore, according to Dwiyogo (2018)learning media is anything that can be used to channel messages and can stimulate the mind, can arouse enthusiasm, attention, and willingness of students so that it encourages the learning process to occur in students. The explanation above suggests that learning media(Al Fasyi, 2015; Alja'am et al., 2017) is anything that is used to channel messages from sources to recipients so that they can stimulate the mind, enthusiasm, and attention to encourage the learning process in students/students.

One form of learning resources designed in learning to support the achievement of learning objectives is using modules. Learning modules are learning resources other than lecturers that are designed systematically by experts in certain fields of study or the teaching profession according to design principles with the aim of increasing effectiveness, efficiency, and increasing student interest in continuing to learn(Adijaya, 2018; Alja'am et al., 2017; Belawati, 2019; Monica & Fitriawati, 2020).

To achieve good skills in mastering these swimming styles, it is hoped that there will be learning innovations that can be provided so that students can learn independently, increase swimming skills outside of compulsory class/class hours. One of the swimming styles that students are expected to be able to master well is freestyle swimming, because freestyle swimming is an indicator for everyone who states that someone has been able to swim well, especially for students who are

prospective teachers who must have the freestyle swimming skills referred to .

Lecturers for the Basic Swimming (Mashud, 2018; Psycharakis & Sanders, 2010)course already have a curriculum document consisting of a syllabus and lesson plan (RPP). The syllabus and lesson plans developed are syllabus and lesson plans designed for face-to-face meetings and independent assignments. The syllabus and lesson plan do not yet contain an electronic/e-learning based learning model.

The learning of Basic Swimming courses has not implemented online (face-to-face, offline)(de Zeeuw et al., 2017) learning methods even though they have used several video learning resources that can be accessed online (youtube)(David et al., 2017), and have not been by design/specially made by lecturers for learning Basic Swimming courses, especially freestyle swimming . Lecturers have implemented the "nine events of instructional" but some have not been implemented, in learning especially the basis/utilization of ICT (for digital content distribution, assignments, discussions and theoretical exams are not yet ICT-based)(Guo et al., 2021).

Meanwhile, for the use of learning resources, lecturers use references from textbooks and printed reference books. Lecturers have not made learning resources in the form of printed or electronic-based modules. When studying in class, the lecturer only briefly gives an explanation of the subject matter, then students practice/practice according to the lecturer's instructions, besides that students also look for learning materials from the internet, summarize or create groups according to the assigned material collected by printout and via email(Aguilera-Hermida, 2020).

According to the lecturer in Basic Swimming theory and practice courses, the role of freestyle swimming teaching materials(Gani et al., 2021) is important for students. Lecturers have made teaching materials for freestyle swimming courses, but they have never been packaged and developed in the form of electronic-based modules. In addition, the implementation of learning theory and practice of freestyle swimming in class(Huot-Marchand et al., 2005), lecturers are

still guided by existing printed learning resources.

METHODS

Research Design

This type of research is quantitative research with a quantitative experiment with two group designs. The population taken were students of Medan State University. The variables in this study were the theory and practice of learning (X1) and swimming skill (Y) swimming sports. For clarity, the conceptual framework for this study is presented schematically for the normality test.

Data Normality Test

Table 1. Tests of Normality

	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistics	df	Sig.	Statistics	df	Sig.
pre-test	.151	75	077	.952	75	
posttest	.153	75	.070	.965	75	

a. Lilliefors Significance Correction

Table 2. Test of Homogeneity of Variances

Levene Statistics	df1	df2	Sig.
.000	1	58	.989

Based on the analysis in the Test of Homogeneity of Variances table, p-value = 0.989 > 0.05 or H0 is accepted. Thus the pre-test and post-test data on the processing data are homogeneous.

To measure the two independent variables above, a questionnaire with an objective test was used in which there were several choices made by themselves depending on the substance of the variables and indicators to be measured.

Participant

Non-random sampling was done to obtain n=75 participants, consisting of Male students which included three climbing category numbers, detailing the participants who joined in this study.

Measurements

The instrument used in this study was a questionnaire that previously had an instrument made using the uploaded document method to

Then, based on the prepared grid instrument test as a validity test and reliability test. Adobt instrument test freestyle swimming in practical test.

Data analysis techniques

After verifying the data, all the data collected will be processed and analyzed according to the objectives and research questions. Data were analyzed using Microsoft Excel and SPSS version 26. This type of descriptive research is an analysis of data performed using the following percentage formula:

Thitung= $\underline{D}$

        SD

$SD = 1\, n - 1 \sum (xi - \bar{x})\, 2\, n\, i{=}1$ t = t count value

D= average difference between measurements 1 and 2

SD = standard deviation of the difference in measurements 1 and 2

n = number of samples.

Once the data was collected, it was analyzed using descriptive analysis. Describe and discuss the data that has been analyzed, determine a qualitative description of the research results for each sub-variable with the average score for each indicator.

RESULTS AND DISCUSSION

There is an argument that traditional learning is the best way to sustain the learning process. Other models are always considered inferior or less efficient. There are no findings to support this argument, and research shows that eLearning models are at least as good as traditional learning. The findings of research conducted in the last seventies and eighties, comparing the use of computers as a learning environment, also showed a slight increase in student achievement after using computers. eLearning also includes many components that are familiar from traditional learning, such as: presentation of ideas by group discussions, arguments and many other forms of conveying information and gathering knowledge.

In this study, the authors seek to bridge the problems encountered in freestyle swimming theory and practice lectures through an e-learning-based product. The following is an overview of the old product with the new product to be developed:

Table 3. Matrix of Old Products (traditional module-based) and New Products (Web-based) Learning Basic Swimming Theory and Practice:

Aspect	Traditional Module Old Products	New product *Website*
Class Discussion	The lecturer usually speaks more than Student	Student Talks at least as much or more than Lecturer
Process Learning	Learning is done with the whole class participate; almost not no group or study individual	Most of the process learning happens within group or by each student
Material Lesson	Lecturer did learning accordingly study program and curriculum which exists	Students participate in determine the subject matter; learning is based on various sources of information, including Website and other data found by students
Emphasis in the process Learning	Students learn "what" and not "how"; busy students and lecturers	Students study "how" and less "what"; learning includes study

	complete the material quota required; para students are not involved in based education research and deep solve the problem, however in the assigned task by the lecturer.	combined research seek and collect information from websites and parties authorized in the communication network; more connected learning with the real world, matter richer and more encompassing lessons material in various formats.
Motivation	low student motivation, and the subject is "far away" from they	High student motivation because involvement in things that are closer to them and technology use.
Lecturer Role	The lecturer is the authority	The lecturer directs students to information
Location Learning	Learning happens within class and campus	Learning takes place without fixed location (anywhere)
Structure Lesson	The lecturer dictates the structure lessons and sharing time	Lesson structure is influenced by group dynamics
Source Study	Lecturers and Textbooks	Lecturers, Textbooks, Books electronics, video, audio, class *on line*, electronic quiz.

The results of data testing from online learning and practice were obtained after the t-test results were carried out as follows:

Statistics

	N	Minimum	Maximum	Means	std. Deviation
pre-test	75	8.00	19.00	12.4667	2.25501
posttest	75	17.00	26.00	21.6000	2.04434
Valid N (listwise)	75				

The results of data analysis refer to the classification below:

Table 4. Score Percentage Classification

Hypothesis Test/Test t

Paired Samples Statistics

	Means	N	std Deviation	std. Error Means
Pairs1 post test	21.6000	75	2.04434	.37324
pre-test	12.4667	75	2.25501	.41171

In the descriptive statistics table, it can be seen that the average process test results with a sample of 75 people, the pre-test results have a mean of 12.47 and a standard deviation of 2.25501. After being given the treatment of the website-based swimming learning model, the post-test results have a mean of 21.6, and a standard deviation of 2.04434. This means that descriptively there is a difference in the average basic swimming skills before and after being given treatment.

Paired Samples Test

	Paired Differences							Sig. (2-tailed)
	Means	std. Deviation	std. Error Means	95% Confidence Interval of the Difference		t	df	
				Lower	Upper			
Pair 1 post test - pre-test	9.13333	2.30042	.42000	8.27434	9.99233	21,746	29	.000

Based on the paired samples test table, a difference in mean = 9.13 is obtained, which means the difference in the score of the process test results. Furthermore, the statistical value of t count = 21.746 with df = 29, then we get a table = 2.045. When compared, the t count > t table and the sig value or p-value = 0.000 > 0.05 or H0 is rejected. Thus it can be concluded that there are differences in the results of the process test between before (pre test) and after (post test) given treatment in the form of a website-based basic swimming learning model in

the research group.

Paired Samples Statistics

	Means	N	std. Deviation	std. Error Means
Pairs1Post-Test	85.7990	75	10.20162	1.86255
Pre-Test	67.4007	75	8.71169	1.59053

In the descriptive statistics table, it can be seen that the average results of the basic swimming test with a sample of 75 people, the pre-test results have a mean of 67.4007 and a standard deviation of 8.71169. After being given the website-based freestyle swimming learning model treatment, the post test results had a mean of 85.7990, and a standard deviation of 10.20162. This means that descriptively there is a difference in the average freestyle swimming skills before and after being given treatment.

Because the variance of the data is not homogeneous, the results of the hypothesis testing can be seen in the Equal variances not assumed and t-test for Equality of Means columns. From this column, the value of t count = 3.638, df = 58, so the table = 2.002 is obtained. When compared, the value of t count > t table and sig (2 tailed) or p-value = 0.001 <0.05 or H0 is rejected.

Discussion

The swimming learning model product is in the form of an electronic module for website-based swimming courses with the Google Site program, the material presented in this product is intended for students, even the general public who are unfamiliar with freestyle swimming lessons. This product is presented in the form of a Google site that is packaged on the website. The resulting learning model products in the form of electronic modules are: (1) This development product is easy to control or operate according to the user's wishes, (2) This product is equipped with videos, slide shows of learning objectives for Unit 1-8

modules, unit 1-8 module materials in the form of a website equipped with videos according to the sub-material being studied, online learning with the Google Site program, and evaluation of questions, this aims to attract user interest in learning, (3) This product can be opened on a computer,

The swimming learning model product is in the form of an electronic module in website-based swimming courses with the Google Site program, which aims to facilitate independent learning of students without the presence of a lecturer.

CONCLUSION

Then according to research by Johnson (2014) reports that teaching online is not only by oneself, but to equate the quality of learning. Even with sometimes limitations to the use of technology such as the need for maintenance and loss of connectivity, teaching online (web-based) nevertheless empowers students and maximizes their learning. Students in the study reported liking being able to proceed at their own pace, and at their own pace, downloading teaching materials, and repeating the module as many times as needed. The seven principles of good practice with an emphasis on technology provide a cohesive framework for quality online instruction. However, the problems that may be encountered are related

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