IJER Indonesian Journal of Educational Review
p-ISSN 2338-2019 | e-ISSN 2335-8407
Vol. 7, No. 1, Juli 2020, 65-77

Available online at
http://pps.unj.ac.id/journal/ijer

THE EFFECTIVENESS OF A BUTTERFLY STYLE SWIMMING SKILL LEARNING MODEL FOR JUNIOR HIGH

Yogi Yuliada[1],Widiastuti[2] , Hernawan[3]
State University Of Jakarta
yogiyuliada@gmail.com
widiastuti@gmail.com
hernawan.fikunj@gmai.com

Abstract

The purpose of this study was to produce a butterfly style swimming learning model for junior high school students. The subjects in this research and development are students of Middle School. The research method used is the research and development model of Borg and Gall. Data collection techniques used are the results of expert validation and effectiveness testing through assessment instruments with t-test statistical data analysis. The results of research and development of a butterfly style swimming skill learning model for junior high school students shows that (1) the butterfly swimming skill learning model for junior high school students significantly improved the butterfly swimming skill of the students (2) Based on data analysis, the average value of pre test 9.3750 and post test average 17.6250 standard deviation of pretest 3.78721 and post test 2.99305 average pretest and post test 8.25000 and standard deviation 3.11119 value of t - 16.771 significance level 0.05 can be said that the Butterfly Style Swimming Skill Learning Model can improve butterfly style swimming skills and is effective to be applied in the learning process of butterfly style swimming skills for junior high school students.

Keywords: *Learning Model, Butterfly Style Swimming*

Learning the butterfly style , the butterfly style includes a unique style of movement that is different from other styles, the butterfly style if you do this style is very good to see. Seeing swimming in a butterfly style is like seeing a dolphin swimming, because the butterfly style movement of its legs resembles that of a dolphin. Learning the butterfly style has a higher level of difficulty than other styles. Research conducted by Sriningsih explained that the butterfly style is difficult:

> *Butterfly style (Butterfly) is a style that is quite difficult to do, especially for beginners. Often the butterfly stroke is given at the end of the lesson compared to the other three styles. By seeing and referring to the complex movements and coordination, the butterfly style swimming is considered the most difficult compared to the other styles. Movement of the hand simultaneously pedaling both when under water (in sweep) and during the resting stage (recovery), this is one of the factors for a person when swimming the butterfly style , it is difficult to raise the head and lift the neck and breathe the air tends to be late. (Sriningsih, 2017)*

Pool style butterfly is considered as an advanced style, meaning the students to master the butterfly should be able to master the other style. Learning the butterfly style is carried out when other styles have been mastered including freestyle, backstroke and breaststroke. It is considered an advanced style because the butterfly style is already different from other styles. For example, from the movement of the legs like a dolphin or often called the *Dolphin Kick* . Research conducted by I W. Setaya. IW Santyasa and I M. Kirna

entitled Application of Direct Learning Model Assisted by Modeling to Increase Motivation and Achievement in Learning Swimming, explained:

> *A teacher is required to be able to develop various kinds of learning models that are applied to swimming learning materials, so that the learning process can take place well and with quality. The success of the learning process cannot be separated from the ability of the teacher to develop and anticipate learning models that are oriented towards increasing the intensity of student involvement effectively in the learning process. The development of an appropriate learning model in accordance with the characteristics of students is basically aimed at creating learning conditions that allow students to be motivated and achieve optimal learning achievement. (I W. Setaya. IW Santyasa and I M. Kirna, 2013)*

Research conducted by I W. Setaya. IW Santyasa and I M. Kirna can be used to support the author's research, which in his research has the application of a learning model. Furthermore, there are also research journals that support the author in conducting research. The research conducted by Darmawan and Destiasari, entitled Development of a Guide Book for Beginners, Dolphin Style Swimming Exercise Model, which occurred in the field:

> *Based on the results of the needs analysis that the researchers conducted for novice swimmers, it was found that 85% liked dolphin style swimming, 90% had never read a favorite swimming exercise book, 85% never got a favorite variation of swimming exercises, 95% really needed book media as a support Swimming training is a favorite, while the results of the needs analysis conducted by the researchers for swimming coaches show that the material for the dolphin swimming style given by the coach is still less varied, and there is no media that can support dolphin style swimming training, then the coach wants book media because book media is considered can help understand the concept of dolphin swimming training. (Darmawan and Destiasari, 2014)*

Research conducted by Darmawan and Destiasari can be used as a support for the author to conduct their research. The location of the equation is that the final result is to make a product for a butterfly style swimming skill guide . The researchers hope that the final results of the research conducted can be the product of a guidebook for learning butterfly style swimming skills . Learning swimming in schools in physical education subject hours requires a varied learning model so that students can easily absorb the material presented by the educator, therefore educators must be ready to have a learning model so that the learning process is in line with expectations from the beginning of the learning planning. The educator prepares a learning plan in the form of a learning model from the beginning of the semester to the assessment at the end of the semester, which is expected from the students to get changes from not knowing to knowing, not being able to swim. The learning model that has been made must be maximized and conveyed to students well, so that students can understand the learning material presented, starting from freestyle swimming , backstroke, breaststroke and butterfly stroke. The learning process of swimming, from freestyle , backstroke, breaststroke, and butterfly style, students can receive the material well, can do it well and correctly. The desired expectation, especially learning butterfly style swimming skills of students can be done well. Students can do butterfly style swimming skills , students can absorb and practice learning material butterfly style swimming skills well so that in learning students do not have difficulties. This article focuses on the effectiveness of the learning model. Butterfly Swimming Skills For Middle School Students. Is the butterfly stroke skills learning model effective to improve butterfly stroke skills for junior high school students?

METHOD

The approach used in this study is the approach combined with the use of the model development *Research & Development* (R & D) from *Borg* and *Gall* to find answers about the problems that have been defined previously. The final results of this development is expected will produce models of swimming skills butterfly for junior high school students who effectively with product specifications are more attractive, modern and more emphasis on the approach play to the students of SMP as well as with their full explanation and clear.

FINDINGS

Effectively Model Learning Skills Pool Style Butterfly

a. First Stage Results of Small Group Trials

The product design of the butterfly style swimming skills learning model for junior high school students that has been made by the researcher was tested on the research subject after the model went through expert testing and was revised according to the suggestions and input of two swimming experts and one learning expert . The next development step is the product development trial stage , at this stage the model that has been tested by experts is then tested in small group trials with 15 research subjects, namely junior high school students. The following is a summary of the results of small group trials conducted by researchers:

Table 1. Small Group Trial Results

No.	Learning Model of Butterfly Style Swimming Skills	Suggestions and Feedback
1	***Streamline* Arms**	The learning model of butterfly style swimming skills for junior high school students can be done and applied.
2	***Streamline* limbs**	The learning model of butterfly style swimming skills for junior high school students can be done and applied.
3	***Streamline* Running**	The learning model of butterfly style swimming skills for junior high school students can be done and applied.
4	**listen**	The learning model of butterfly style swimming skills for junior high school students can be done and applied. But on cue there are a few changes according to the situation, to make it more efficient.
5	***Dolphin* Friends**	The learning model of butterfly style swimming skills for junior high school students can be done and applied.
6	***Noodle Man To Man***	The learning model of butterfly style swimming skills for junior high school students can be done and applied.

7	***Dolphin Jump***	The learning model of butterfly style swimming skills for junior high school students can be done and applied.
8	***Dolphin Tiger Sprong***	The learning model of butterfly style swimming skills for junior high school students can be done and applied.
9	***Tiger Sprong* Barriers**	The learning model of butterfly style swimming skills for junior high school students can be done and applied.
10	***Noodle* Walk**	The learning model of butterfly style swimming skills for junior high school students can be done and applied. But with regard to the content of the movement there is a slight change, where previously the obstacles moved places, to save time in learning, the obstacles were standing or silent.
11	***Hulahoop* Walking**	The learning model of butterfly style swimming skills for junior high school students can be done and applied. But with regard to the content of the movement there is a slight change, where previously the obstacles moved places, to save time in learning, the obstacles were standing or silent.
12	***Dolphin Up Down***	The learning model of butterfly style swimming skills for junior high school students can be done and applied. But with regard to the content of the movement there is a slight change, where previously the obstacles moved places, to save time in learning, the obstacles were standing or silent.
13	***Dolphin* Arm Walk**	The learning model of butterfly style swimming skills for junior high school students can be done and applied
14	**Squat *Dolphin* Arms**	The butterfly style swimming skills learning model for junior high school students cannot be applied, because it is too difficult and complicated to do for the learning process.
15	***Dolphin* Friends Arm**	The learning model of butterfly style swimming skills for junior high school students can be done and applied
16	**Pluit *Dolphin***	The butterfly style swimming skills learning model for junior high school students cannot be applied, because it is too complicated for the learning process.
17	**Noodle *Dolphin***	The learning model of butterfly style swimming skills for junior high school students can be done and applied. But with regard to the content of the movement there is a slight change, where previously

		the obstacles moved places, to save time in learning, the obstacles were standing or silent.
18	***Hulahoop Dolphin***	The learning model of butterfly style swimming skills for junior high school students can be done and applied. But with regard to the content of the movement there is a slight change, where previously the obstacles moved places, to save time in learning, the obstacles were standing or silent.
19	**Starfish *Dolphin***	The learning model of butterfly style swimming skills for junior high school students can be done and applied. However, related to the content of the movement there is a slight change, where previously the obstacles moved places, in order to save time in learning, the obstacles were *standing* or silent.
20	***Hulahoop Underwater***	The learning model of butterfly style swimming skills for junior high school students can be done and applied
21	***Underwater Noodle***	The learning model of butterfly style swimming skills for junior high school students can be done and applied

Based on the evaluation of small group trials conducted by researchers, it can be concluded as follows:

a. The learning model is really needed for students, in addition to getting a new atmosphere in the learning process, students can easily absorb the learning material delivered by educators.
b. The learning model needed, a varied learning model.
c. Models 14 and 16 cannot be applied, because at the time the models were too complex, making it difficult for students to learn.
d. Model 4 relates to the signal that there are a few changes according to the situation, to make it more efficient.
e. Models 10-12, 17-19 related to the content of the movement have a slight change, where previously the obstacles moved places, in order to save time in learning, the obstacles were stand- *alone* or silent.

b. Results of Second Stage / U ji Try Powerhouse

After the results of the trials in small groups were obtained, the researchers conducted an analysis related to several findings in the field related to the model developed. Based on these findings, the researchers made revisions and improvements in order to improve the butterfly style swimming skills learning model which resulted in 19 learning models of butterfly style swimming skills that can be applied to junior high school students . After the revision was carried out, the researcher carried out the next development stage, namely the trial phase in large groups. In the large group trial stage, it is basically the same as the small group trial, but the research subjects are becoming more numerous and heterogeneous. Large group trial conducted by the research institute, using the research subjects as much as 30 junior high school students , Here is a summary of the results of testing large groups conducted by researchers:

Table 1 Results of Large Group Trials

No.	Learning Model of Butterfly Style Swimming Skills	Suggestions and Feedback
1	***Streamline* Arms**	The learning model of butterfly style swimming skills for junior high school students can be done and applied.
2	***Streamline* limbs**	The learning model of butterfly style swimming skills for junior high school students can be done and applied.
3	***Streamline* Running**	The learning model of butterfly style swimming skills for junior high school students can be done and applied.
4	**listen**	The learning model of butterfly style swimming skills for junior high school students can be done and applied.
5	***Dolphin* Friends**	The learning model of butterfly style swimming skills for junior high school students can be done and applied.
6	***Noodle Man To Man***	The learning model of butterfly style swimming skills for junior high school students can be done and applied.
7	***Dolphin Jump***	The learning model of butterfly style swimming skills for junior high school students can be done and applied.
8	***Dolphin Tiger Sprong***	The learning model of butterfly style swimming skills for junior high school students can be done and applied.
9	***Tiger Sprong* Barriers**	The learning model of butterfly style swimming skills for junior high school students can be done and applied.
10	***Noodle* Walk**	The learning model of butterfly style swimming skills for junior high school students can be done and applied.
11	***Hulahoop* Walking**	The learning model of butterfly style swimming skills for junior high school students can be done and applied.
12	***Dolphin Up Down***	The learning model of butterfly style swimming skills for junior high school students can be done and applied.

13	***Dolphin* Arm Walk**	The learning model of butterfly style swimming skills for junior high school students can be done and applied.
14	***Dolphin* Friends Arm**	The learning model of butterfly style swimming skills for junior high school students can be done and applied.
15	**Noodle *Dolphin***	The learning model of butterfly style swimming skills for junior high school students can be done and applied.
16	***Hulahoop Dolphin***	The learning model of butterfly style swimming skills for junior high school students can be done and applied.
17	**Starfish *Dolphin***	The learning model of butterfly style swimming skills for junior high school students can be done and applied.
18	***Hulahoop Underwater***	The learning model of butterfly style swimming skills for junior high school students can be done and applied.
19	***Underwater Noodle***	The learning model of butterfly style swimming skills for junior high school students can be done and applied.

Based on the evaluation of large group trials conducted by researchers with a larger and more heterogeneous number of research subjects, it can be concluded as follows:

a. The butterfly style swimming skills learning model really helps the learning process for students. Students were delighted with the new atmosphere in the learning process varied and tools to help the unusual student use. Making it easier for students to absorb learning material.
b. Model 1 to model 19 can be done and implemented properly, according to the expectations of the researcher.
c. Educators are greatly helped by the butterfly style swimming skills learning model.

After the model undergoes stage II revision from the results of small and large group trials. Then proceed by testing the effectiveness of the butterfly style swimming skills learning model that has been compiled and refined through several stages that have been described. The effectiveness of the developed model was carried out on students of Al-Azhar Islamic Junior High School Kelapa Gading, East Jakarta with 40 students as subjects.

Table 3 Assessment Model Learning Skills Pool Style Butterfly For Junior high school students before *treatment* (*Pre Test),* after *treatment* (*Post Test*)

Respondents	Pre Test Score	Post Test Score

X1	10	20
X2	5	15
X3	10	20
X4	15	20
X5	5	20
X6	10	15
X7	5	20
X8	10	15
X9	5	20
X10	10	15
X11	15	20
X12	10	15
X13	15	20
X14	10	20
X15	5	15
X16	10	20
X17	5	15
X18	15	20
X19	5	15
X20	10	20
X21	5	10
X22	10	15
X23	15	20
X24	5	15
X25	10	20
X26	15	20
X27	5	15
X28	10	20
X29	5	10
X30	10	20
X31	15	20
X32	10	15
X33	15	20
X34	10	20
X35	5	15
X36	10	20
X37	5	15
X38	15	20
X39	5	15

X40	10	20
TOTAL	375	705

Table 4 Learning Model of Butterfly Style Swimming Skills for Junior High School Students with SPSS

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Mean Error
Pair 1	Pre Test	9.3750	40	3,78721	.59881
	Post_Test	17,6250	40	2.99305	.47324

Paired Samples Correlations

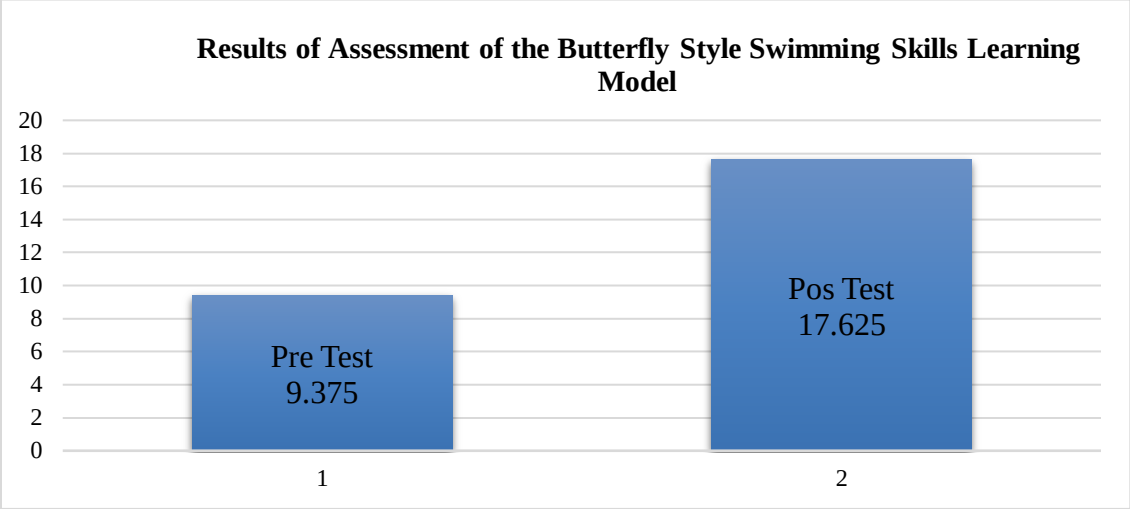
		N	Correlation	Sig.
Pair 1	Pre_Test & Post_Test	40	.601	.000

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Mean Error	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Pre_Test - Post_Test	-8.25000	3.11119	.49192	-9.24501	-7.25499	-16,771	39	.000

Based on the data analysis, it was obtained that the pre-test mean value was 9.3750 and the average post-test was 17.6250, the standard deviation of the pre-test was 3.78721 and the post-test was 2.99305, the average pre-test and post-test were 8.25000 and the standard deviation was 3.11119, the value of t -16.771, the significant level was 0.05 because H_0 is rejected, Based on the information it can be said that the Model learning skills Pool style butterfly can improve swimming skills butterfly and effective to be applied in the process of learning skills butterfly style swimming for students in junior high. The following are the results of the initial ability of the butterfly style swimming skills of junior high school students who were used as research subjects before giving the treatment and after giving *treatment* with the butterfly style swimming skills learning model with a bar chart :

Diagram 4.1 Results of Assessment of the Butterfly Style Swimming Skills Learning Model



The test results of the butterfly style swimming skills learning model for junior high school students, with the results of the pre-test 9,375 and the post-test 17,625. So it can be concluded according to the bar chart that from pre test to post test after being given treatment has increased . The learning model of butterfly style swimming skills can be said to be effective after analyzing the data above.

DISCUSSION

Based on the obtained numbers in the table above, the Learning Model of butterfly style swimming skills is effective for use in learning butterfly style swimming skills for junior high school students. The effectiveness of the student learning process can be influenced by parts of the student experience. "Student characteristics are parts of student experience that affect the effectiveness of the learning process". (C. A. Budiningsih, 2011, 8), Seeing the shortcomings and advantages of the products made, there are inputs that the researchers will convey in order to achieve the improvement of this product, a model is something that describes a mindset. A model usually describes a whole concept that is interrelated. The model can also be seen as an attempt to concretize a theory as well as an analogue and representation of the variables contained in the theory. (Pribadi, 2009, 86)., "Learning is an activity that shows the occurrence of new abilities which are relatively constant due to effort. The learning process occurs because of the interaction of individuals with their environment. "(Ermawan Susanto, 2010, 6), a direct learning model in physical and health education" a model is a picture of reality which is intended to explain the behavior of what is said. " (Dini Rosdiani, 2012, 3) The validity of a model can be accounted for because the model is compiled through theoretical studies and scientific procedures. Furthermore, "the model is a representation of a system which is seen to represent the real system." (Sri Haryati, 2012, 19). The learning model of butterfly style swimming skills for junior high school students made by researchers is a product that aims to help physical education teachers,

"The learning model is a part of a design that describes the detailed process and the achievement of environmental situations that allow students to interact so that changes or developments occur in students." (Sukmawati, Hartoto, 2015, 367). Improve butterfly swimming skills and as a reference model for learning butterfly style swimming skills for junior high school students. The learning model of butterfly style swimming skills is made based on the level of needs of junior high school students in learning butterfly style swimming. This product, after being reviewed regarding several weaknesses that need improvement,

can be conveyed several advantages of this product, including: a. Improve butterfly swimming skills for junior high school students. b. Students are enthusiastic and happy during the learning process. c. During the learning process students feel different situations, vary and use tools. d. As a reference for learning butterfly style swimming skills for junior high school students. e. The learning model of butterfly style swimming skills is carried out from easy to difficult things, so that students easily absorb the learning material. This is in line with Marrelli, Tondora, and Hoge (2005: 533-561) that a good model has the following characteristics: (1) simple; (2) applicable; (3) important; (4) controllable; (5) adaptable; (6) communicable. Referring to these characteristics, in compiling the model, the following criteria must be met: (1) identifying the key framework; (2) detailing each part or stage in the framework; (3) select or modify parts of the process that require improvement; (4) arranging the process in a model; and (5) revising

This development research has been tried to the maximum in accordance with the abilities of the researchers, but in this research there are still several limitations that must be acknowledged. The limitations include the following:

a. The products used are far from perfect.
b. Instructions or explanation of the butterfly style swimming skills learning model for junior high school students who are still far from perfect.
c. When field trials, this research will be even better if it is done in a location that is not too crowded so that students' conditions can be more conducive .

CONCLUSION

Based on the process of development carried out by researcher from the beginning to the creation of a product in the form of model development of learning skills swimming butterfly, with test experts, the small group trial, testing a large group and test the effectiveness of the model skill style pool butterflies for junior high school students can be concluded that: The effectiveness of the model developed is done in junior high school students the Islamic Al-Azhar Kelapa Gading Jakarta Timur with the subject of 40 students is very effective against

REFERENCES

Adi Prastyo Kurniawan, Sasminta Christina Yuli Hartati. (2016). Application of Learning Models with a Playing Approach to Increasing Basic Movement Skills in Learning Physical Education, Sports and Health (Studies on Male Students of Class VII SMP Negeri 1 Balongpanggang Gresik). Journal of Sports and Health Education, Volume 04, Number 01, 148-156. doi: http: //ejournal.unesa.ac.id/index.php/jurnalpend Pendidikanjasmani/issue/archive

Arief Darmawan, Citra Destiasari. (2014). Development of a Dolphin Style Swimming Exercise Model Guide Book for Beginners. Motion, Volume V, No. 1, March 2014.

C. Asri Budiningsih. (2011). Student Characteristics as a Foothold in Learning Research. ISSN Educational Scientific Journal: 0216-1370 February 2011.

Dini Rosdiani. (2012). Direct Learning Models in Physical Education and Health. Bandung: Alfabeta..

Ermawan Susanto. (2010). Aquatic Audiovisual Media To Improve Learning Quality. Journal of Educational Research, Volume 13, Number 1, February 2010, 1-21

Firly Baihaqi Martindar, Sasminta Christina Yuli Hartati. (2014). The Effect of Team Games Tournament (TGT) Cooperative Learning Model on Learning Outcomes of Freestyle Swimming (Crawl) (A Study on Class X Students of Fishing Ship Engineering Department, SMK Negeri 4 Probolinggo). Journal of Sports and Health Education, Volume 02, Number 01, 164 - 170. doi: http://ejournal.unesa.ac.id/index.php/jurnal-pend Pendidikan-jasmani/issue/archive

I W. Setaya. I W Santyasa. I M. Kirna. (2013). Application of Direct Learning Model Assisted by Modeling to Increase Motivation and Achievement of Swimming Learning. Ganesha University of Education Postgraduate Program E-Journal, Volume 3, 2013.

Martin Sudarmono, Tandiyo Rahayu, Setya Rahayu. (2013). Bavos Game Development for Physical Education Learning, Sports and Health for Junior High School Students. Journal Of Physical Education And Sports 2 (1) 2013.

Meredith D. Gall, Joyce P. Walter R. Borg. (1983). Educational Research An Introduction. NewYork: Longman..

Sri Haryati. (2012). Research And Development (R&D) As One Of The Research Models In Education. Vol. 37 No. 1, 15 September 2012, 11-26

Sriningsih. (2017). Butterfly Style Swimming Skills Through Playing Approaches in Aquatic Learning. Journal of Physical Education and Sports Volume 9 Number 2. September 2017..