

Comparison of the 25 Meter Freestyle Swimming Exercise Method with Swimming Board Aids and Friends Assistance for Extracurricular Students of Nurul Huda Integrated Islamic Elementary School in 2020

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ABSTRACT

This research was based on the observations and experiences of researchers, which most children have dared to come in the water but in doing the correct movement for the freestyle, they still need direction. Therefore, the sports physical Education and health (PJOK) coach or teacher played an important role in directing good and correct swimming lessons. In this study, there were two ways to learn freestyle swimming they were using a float (swimming board) and with the help of friends so that the implementation of freestyle swimming can be achieved.

The problems of this researcher are (1) How much was the effect of the exercise method using the swimming board on the 25 meter freestyle swimming technique? (2) How much influence did the training method with the help of a friend have on the 25 meter freestyle swimming technique? (3) Which was better the training method using a swimming board or a friend's help for the 25 meter freestyle swimming technique?

This research was a type of quasi-experimental research (quay experiment) with a quantitative approach. Experimental research was a research conducted strictly to determine the causal relationship between the variables.

The conclusions of this study are: (1) In this study, there was an effect of exercise using a swimming board in a 25 meter freestyle swimming speed. From the initial test/pretest the fastest time was 01.29, while the final test/posttest got the fastest time of 01.11. Based

on the research problem formulation and research results, there were significant differences in freestyle swimming using a swimming board and the help of friends. It was proven from the results using the SPSS calculation where the significance of the swimming board was $0.017 < 0.05$, so there was a difference between the pretest and the posttest which the sig was less than 0.05. (2) The effect of swimming exercise with the help of a friend in a swimming speed of 25 meters. From the initial test/pretest the fastest time was 01.31, while the final test/posttest got the fastest time of 01.27. Then from the results of the freestyle swimming research using the help of friends, the results were $0.084 > 0.05$, so there was no significant difference from the results of the pretest and posttest using the help of friends. (3) So, it could be the concluded that there was a significant difference between using a swimming board and using a friend's help. In this study, the method of using the swimming board was better than the 25 meter freestyle swimming. It was proven from the results using the SPSS calculation where the significance of the swimming board was $0.017 < 0.05$, so there was a difference between the pretest and posttest which at sig was less than 0.05, then there was no significant difference between the results of the pretest and posttest using the help of friends. Based on the conclusions of this study: (1) For swimming students, they can use and run an exercise program with methods, either using assistive devices or not using assistive devices to increase the speed of the 25 meter freestyle

swimming correctly. (2) For swimming coaches, in order to be able to innovate more in developing training methods, either using assistive devices or not to get the best results.

Keywords: [Freestyle swimming, swimming board, friend's help]

INTRODUCTION

Swimming is a sport that is in direct contact with water and is a sport that is beneficial for health where the whole body moves while swimming. According to Annayanti Budiningsih (2010: 2) "swimming is one of the water sports that is done by moving the body in the water, such as using the feet and hands so that the body floats on the surface of the water". Swimming has many benefits for the body and can be done by people of all ages. In swimming, there are several styles taught as follows: (1) Freestyle (the crawl stroke), (2) the breast stroke, (3) the back crawl stroke, (4) the butterfly stroke. The four swimming styles mentioned above are the freestyle styles that were first taught by teachers and swimming coaches before being introduced to other styles.

The definition of freestyle swimming according to (Anggara et al., 2018), freestyle is swimming with the chest position facing the water surface. Both arms are alternately moved far forward with a paddling motion, while both legs are alternately whipped up and down. In swimming freestyle, the position of the face is facing the surface of the water. C. Rob Orr and Jane B. Tyler (2008:15), "freestyle swimming is done with the body in a prone position; the transverse position of the arms is straight above the head, expanding like a log". Swimming has many benefits for fitness or reducing stress and is often used as health therapy.

This training program for students in swimming sports must, of course, be a separate focus so that students have skills, and one of these developments and trainings can be done within the scope of the school through extracurricular activities. "It was explained that extracurricular activities are

programs from the school, in the form of student activities aimed at deepening and expanding students' knowledge, optimizing related lessons, channeling talents and interests, abilities and skills and to further strengthen students' personalities. This goal implies that extracurricular activities are closely related to the teaching and learning process. Then it was also explained that extracurricular activities are activities held outside the lesson hours listed in the program structure according to the circumstances and needs of the school, in the form of enrichment and improvement activities related to curricular programs. (Depdiknas, 2004:4).

Based on observations at the Sumber Agung Kediri swimming pool, the introduction of swimming to children at school age has been carried out, it is intended for children to learn swimming and then to train children's motor skills. At Nurul Huda Integrated Islamic Elementary School, there is a swimming extracurricular which is held at the Sumber Agung swimming pool, which is followed by grade 3 to grade 6 students. Most of the children have dared to come in the water but in doing the correct movement for freestyle (crawling), still need direction. Therefore, the PJOK coach or teacher plays an important role in directing good and correct swimming lessons. In this study, there are two ways to learn freestyle swimming using a float (swimming board) and with the help of friends so that the implementation of freestyle swimming can be achieved.

Swimming board is learning to swim using a float board which is very efficient and effective, because when moving students all practice using a float board which can reduce body weight while in the water, so that the movement of the arms and legs is lighter according to Corleet's theory (in Boyke 2013). In this case the media in question is a swimming board or float board. "The float board is a tool that is used as a medium in swimming, to train leg strength and swimming techniques that can

be more easily understood by students systematically" (Megasari, 2012: 7). Thus the attention of swimming can be focused on the technique of foot movement and breathing. Using a swimming board can help reduce the body weight of swimmers in the water and can help the body position become streamlined (flat) so that it has a smaller shape and resistance (Subagyo and Sismadiyanto, 2009).

There are 3 methods that can be taught in swimming, namely: using a buoy, helping friends and holding on to the edge of the pool. Of the three types of methods, the author uses the method of using swimming board and the help of a friend because the two forms of the method are both moving or dynamic while the method of swimming by holding on to the edge of the pool is silent or static according to Roji (2006: 187).

Based on the description above, the researcher wishes to examine "comparison of the 25 meter freestyle swimming exercise method with swimming board aids and the help of friends for extracurricular students of Nurul Huda Integrated Islamic Elementary School in 2020".

LITERATURE REVIEW

25 Meter Freestyle Swimming

Swimming is a sport that can train and develop the muscles of the body as a whole, swimming is also a very good sport to improve and maintain one's physical fitness. Swimming is also useful for building strength and endurance (Saputra, 2010). Swimming is one of the water sports that is done by moving the body in the water, such as using the feet and hands so that the body floats on the surface of the water (Annayanti B, 2010, 2). Swimming is the method by which humans (or other animals) movethemselves through water, which means a way for people or animals to move their bodies in water (Badruzaman, et al 2007, 13). From this understanding, it is explained that swimming is very beneficial

for the body because all bodies move so it is good for body fitness.

Freestyle is swimming with the chest position facing the water surface (Anggara et al., 2018). Both arms are alternately moved far forward with a paddling motion, while both legs are alternately whipped up and down. When swimming freestyle, the position of the face facing the surface of the water. "The floatation of an object in a liquid due to its buoyancy or lift", means "an effort to float or lift the body above the water surface" (Badruzaman, et al (2007, 13). Freestyle swimming is done with the body in a prone position, transverse stance straight arms directly above the head, expanding like a log (C. Rob Orr and Jane B.tyler, 2008:15).Freestyle is generally defined as people freely choose whatever style they want and like in swimming. While in competition, to choose the freestyle, which is usually called the crawl style. The freestyle or crawl is called a very efficient style because it involves a lot of muscles and joints in the body. Freestyle swimming is a swimming style with the chest position facing the surface of the water (Budiningsih, 2010, 29) this is in line with the opinion of Thomas (2000:13) which states that the crawl style is the only description of swimming. This style is the fastest style and is based on this style as well. The skill of a person swimming will be able to master this crawl style swimming must be mastered first the basic techniques of the crawl style.

The basic components of swimming are: (1) Water orientation, (2) Water entry, (3) Breath control, (4) Buoyancy, (5) Arm propulsion, (6) leg action, (7) complete swimming (combined movement) (Langendorfer & Bruya, 1995: 38). The styles in swimming are: 1) breaststroke, 2) freestyle (crawl stroke), 3) backstroke (back crawl stroke), 4) butterfly stroke (Marshudi, 2009). :11). all the steps are done frequencily 3-5 times a week, intensity 75%-85% DJM, with a training time about 20-60 minutes continuously with stages for

beginners 15-20 minutes, then if someone can pass the initial stage then increase it to 30 minutes and so on, the final stage is 60 minutes (Sudarsono, 2008).

Principles of Swimming Biomechanics

The first thing that the trainers need to master is the principles of biomechanics. Mastering the principles of biomechanics for coaches is very helpful in the process of forming athletes' swimming techniques. According to Susan J Hall (2005: 489-50), (1) the viscosity and density of the swimming pool water (2) the buoyant force (the downward force), (3) frictional force, namely fluid-frictional drag/drag force and wave drag.

Streamlined body position is the position of the body that is cultivated as flat as possible so that it is almost close to the surface of the water (James G Hay, 1995, 17). This position helps the swimmer reduce resistance to the forward thrust. This will be more effective in the use of movement and efficient in the use of energy, so that swimmers are able to swim faster. Another biomechanics principle is Inertia; it is the obstacles that occur in swimmers due to various kinds of technical changes made during swimming (Midtlying, 1992, 8). Understanding the principles of biomechanics is an important factor for coaches, considering that swimming is a sport which the medium consists of water and air.

Swimming Aids (Swimming board)

Media is a tool that can help trainers in the teaching and learning process with the intention of serves to stimulate students in learning (Gagne in Trisna, 2014). Media in the swimming training section is a swim board or a float board. "The float board is a tool used as a medium in learning to swim, both for training leg strength and learning swimming techniques that can be more easily understood by students systematically" (Megasari, 2012: 7).

The advantage of using this float board is that the frequency of training is more because every swimmer has one float board,

swimmers are happier because they know the results faster with moving movements, improving the style will be easier because the buoy will help novice swimmers to make a streaming position, will quickly master the parts of swimming (Rizkiyansyah and Mulyana, 2019). Using a float board can help reduce the swimmer's weight in the water and can help the body position become flat so that it gets a shape that has a smaller resistance (Subagyo and Sismadiyanto, 2009).

Swimming Aid with Friends' Help

The low level of self-confidence of athlete can be identified with symptoms of feeling hesitant when trying it, still not positive about them and so on. They feel anxious when entering the water (Khusniyah, 2019; Tahki, 2017). Even though athletes have tried, they still find difficulties during the swimming practice process. These difficulties can be in the form of difficulty in breathing, imperfect leg movements, or hand movements that are difficult to control and difficult to coordinate all techniques into a freestyle. One way that can be done to increase this confidence is to use the peer-assisted learning method (Ramadhani, 2013; Sanjaya, 2016). Learning to swim with the help of friends is an alternative that is often used for beginners. In the freestyle, the help of a friend can be done in the technique of hand movements and foot movements, or the coordination of the four techniques in this style.

A friend's help can be in the form of holding hands while practicing footwork techniques. Then holding the feet while practicing hand movements (Sulikan, 2017). Help can also be done when training coordination between breathing techniques, hand movements, foot movements. This method of helping friends is believed to be effective in increasing self-confidence. Learn the freestyle swimming leg movements with the help of a friend such as "Doing the freestyle swimming leg movement, both arms are held by a friend. The arms, body, and legs are straight and the source of the movement of the legs from

the groin to the knees is not bent, but only when they move, until when they move their legs forward, those holding the arms move backwards (Roji, 2006: 186). Learning freestyle swimming hand movements with the help of friends such as "Doing freestyle swimming hand movements with both feet held by a friend from behind, until the position of both legs and body is straight and the body floats on the surface of the water" (Roji, 2006: 188).

MATERIALS & METHODS

This type of research was a quasi-experimental type of research (quay experiment) with a quantitative approach. The research design pattern was one Group Pretest-Posttest Design. (Maksum, 2009:60). In this study, the method used to obtain data was the experimental method. Quantitative research was based on the philosophy of positivism which emphasizes objective phenomena that were studied quantitatively or conducted using numbers, statistical processing, structures, and controlled experiments (Sukmadinata, 2010: 53).

The research technique used was pre-experimental design. Pre-experimental research results were the dependent variable was not influenced by independent variables (Sugiyono, 2010, 109). The design used was a two group pretest-posttest design. In this design, two groups of subjects were studied, they were by giving a pretest (pretest) to the research sample after it was treated and evaluated by giving a final test (posttest).

The population in this study was the entire population; it was the swimming extracurricular students of Nurul Huda Integrated Islamic Elementary School. The study or research was also called a population study or census study (SuharsimiArikunto, 2014: 173). The sample in this study was selected from the fourth grade students of Nurul Huda Integrated Islamic Elementary School swimming extracurricular in 2019, totaling 10 students. The instrument used was the

initial freestyle sprint test with a distance of 25 meters and the final test in the form of freestyle sprint swimming with a distance of 25 meters. While the treatment instrument consisted of a training method using a swimming board and without a swimming board, then the analysis used to calculate was the One Way ANOVA test with the help of SPSS 21.

Statistical Analysis

The next step was to process the data and analyze the data that has been collected using statistical methods. The prerequisite test used in this study used the normality test, using the Kolmogorov-Smirnov Test, homogeneity test and hypothesis testing was used One Way ANOVA with the help of SPSS 21.

RESULT

The speed test that was carried out was the 25 meter freestyle sprint to compare the swimming speed of the 25 meter freestyle with the training method using a swimming board and using a friend's help. The pretest and posttest groups were divided into 2 groups, namely: group A was given training using assistive devices swimming board, while group B used a friend's help.

Before the analysis using One Way Anova, a normality test was carried out to determine whether the data from the variables studied were normal or not. The test results showed that the data in the test was normally distributed while the results of the homogeneity test were obtained showed that data were homogeneous, so that the analysis could be carried out by parametric statistical tests. Further testing using One Way Anova obtained the following results.

Table 1. Swimming Board Hypothesis Testing

ANOVA					
time					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	,031	1	,031	3,891	,084
Within Groups	,064	8	,008		
Total	,096	9			

Based on the results of the analysis of the one way ANOVA test, it was obtained that F_{count} in hypothesis testing using a swimming board was 9.030 with a significance of $0.017 < 0.05$, then H_0 was rejected and H_a was accepted, means that there were differences in the 25-meter freestyle swimming exercise method with a swimming board.

Table 2. Hypothesis Testing of Friend's Help

ANOVA					
time					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	,090	1	,090	9,030	,017
Within Groups	,080	8	,010		
Total	,170	9			

In the one-way ANOVA analysis test, it was obtained that F_{count} on the hypothesis using the help of friends was 3,891 with a significance of $0.084 > 0.05$, then H_0 was accepted and H_a was rejected, meaning that there was no difference in the 25-meter freestyle swimming exercise method with the help of friends.

DISCUSSION

Comparison of 25 Meter Freestyle Swimming Training Methods with Swimming Board Tools

The result of this study also supports previous researchers by Reddy Pramandhika (2009) with the title Comparison of Swimming Learning Methods Using Lifebuoys and Friends' help in Freestyle Swimming Techniques at a Distance of 25 Meters for Male Students in Swimming Extracurricular at SMA Negeri 2 Mranggen, Demak Regency, 2008/School Years. 2009, there is a difference in learning outcomes between using a buoy and a friend's help. A better method is to use a friend's help.

Comparison of 25 Meter Freestyle Swimming Training Methods with Friends Help Tools

Based on the results of research on the comparison of the 25 meter freestyle swimming exercise method with the friends' help for extracurricular students at Nurul Huda Integrated Islamic Elementary School. then swimming practice with the help of a friend at a swimming speed of 25 meters from the initial test/pretest got the fastest time of 01.31, while the final test/posttest got the fastest time of 01.27. Then from the results of the freestyle swimming research using the help of friends, the results were $0.084 > 0.05$, so there is no significant difference from the results of the pretest and posttest using the help of friends.

CONCLUSION

Based on the results of data analysis and discussions conducted in this study, it can be concluded that there is a significant difference between using a swimming board and using a friend's help for extracurricular students at Nurul Huda Integrated Islamic Elementary School in 2020. The method of using the swimming board is better for the 25 meter freestyle swimming. This is evidenced from the results of the calculation using SPSS, the significance of the swimming board is $0.017 < 0.05$, so there is a difference between the pretest and posttest which is at sig less than 0.05. 05, then there is no significant difference between the results of the pretest and posttest using the help of friends.

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