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by Hansi Effendi

THE EFFECT OF VISUALIZATION LEARNING AND PRACTICE ON FREESTYLE SWIMMING SPEED IN CHILDREN AGED 10-13 YEARS AT BEN SWIMMING COURSE

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Abstract

The aim of this research is to determine the effect of visualization and practice learning on freestyle swimming speed in children aged 10–13 years at the Ben Swimming Course. The method used is experimental with the sample used was 30 children,. The instrument used was a 25-meter freestyle swimming speed test. The data analysis technique uses tests and measurements, namely t test analysis with α = 0.05, through prerequisite tests, normality tests, and homogeneity tests. Based on the results of the research that has been carried out, a conclusion can be drawn that: 1) There is a significant influence of visualization learning and practice on freestyle swimming speed, with a value of tcount = 13.153 > ttable = 2.145. 2) There is no significant effect of the control group on freestyle swimming speed, with a value of t = 1.743 < ttable = 2.145. 3) There is a significant difference between the visualization and practice learning group and the control group regarding freestyle swimming speed, with a value of t = 2,100 > t table = 2,048.
Keywords: ages 10-13 years, freestyle swimming, practice, visualization

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INTRODUCTION

Swimming is one of the complex sports and has various objectives, including recreational sports, educational sports, rehabilitation sports and achievement sports. To achieve maximum swimming achievement requires a directed and long process to achieve it, so that basic principles are also needed to produce athletes who excel. Trainers or trainers must also be able to create training programs in a planned, systematic and progressive manner so as to achieve maximum performance.

According to the Law of the Republic of Indonesia Number 11 of 2022 concerning Sports "that for the sake of smooth life and human welfare, national

development in the field of sports is carried out in a planned, systematic, integrated, tiered, and sustainable manner, and is oriented towards achievement and improving the welfare of sports players, so that development and management are directed at achieving quality public health and fitness, equitable access and fulfillment of sports infrastructure, achievement and improvement of the sports climate, and existing sports governance. in line with community development and world sports competition.

Swimming is one type of sports activity that uses the body to float and cross water using legs and hands (Subagyo, 2017: 53). There are four types of styles in swimming, including breaststroke, freestyle (crawl style), backstroke, and butterfly style. Based on mileage, age, gender and swimming style, swimming numbers in the competition can be grouped (Rahmadana & Maidarman, 2018). Freestyle swimming numbers for men and women according to the International Swimming Federation (FINA) and according to Indonesian Aquatics include 50m, 100m, 200m, 400m, 800m, and 1500m.

Freestyle is swimming with the body position facing the surface of the water, both hands are moved forward alternately with a pedaling motion, while both legs are alternately swung up, down, up and down, with the center of movement coming from the groin. Freestyle is a style of swimming that involves moving your hands above the surface and allows you to move through the water faster than other styles. Freestyle swimming is one way to swim fast.

Based on observations made in freestyle swimming lessons for Ben Swimming Course students, it can be seen that there are still many swimmers who still do not optimize swimming speed, this is shown when swimming some

swimmers still make mistakes when doing freestyle swimming, including some swimmers when doing arm pedaling movements or doing arm rotation movements that are still not good enough to slow down the speed.

METHOD

In their research, researchers use experimental methods which are part of quantitative methods, and have their own characteristics with the presence of treatment which aims to determine the effect of independent variables (treatment) on the dependent variable. In this study, it will be described the magnitude of the influence of the independent variable (treatment) of visualization learning and practice on freestyle swimming speed. The treatment carried out is 16 meetings. Giving treatment (training by watching videos and practicing them) is done three times a week. The population in this study were 30 Ben Swimming Course students. The sample of this study is the same as the population, namely 30 Ben Swimming Course students consisting of 30 men. The research location is Global Surya Swimming Pool, Bandar Lampung City. The research data collection time was conducted on February 10, 2024. The instrument used in this study is the categorization of test results, then grouped into five categories referring to the opinion of Thoha (2003, pp. 100-101) Norm Reference Assessment (PAN) can be seen in the table as follows:

Tabel 1. Norm-referenced Assessment (PAN) Scale

No	Interval	category
1	$X \geq M + (1,5\ SD)$	Less than Once
2	$M + (0,5\ SD) \leq X < M + (1,5\ SD)$	Less
3	$M - (0,5\ SD) \leq X < M + (0,5\ SD)$	Medium
4	$M - (1,5\ SD) \leq X < M - (0,5\ SD)$	Good
5	$X < M - (1,5\ SD)$	Excellent

This study uses data collection techniques, namely observation, observation techniques carried out by direct observation of the object or place of research to obtain and find information about visualization learning and practice and freestyle swimming speed in children aged 10-13 years at Ben Swimming

Course. Then Literature Techniques, Literature is used to get the concepts and theories needed in this study, namely about the effect of visualization learning and practice on freestyle swimming speed in children aged 10-13 years at Ben Swimming Course. Finally Test and Measurement, A process of giving awards or decisions based on data / information obtained through the measurement process so as to obtain data objectively, quantitatively and the results can be processed statistically. The test used in this study was to use a freestyle swimming speed test.

The data analysis technique used is the normality test, a test to see whether the research data obtained has a normal distribution or distribution or not. For this normality test is to use the liliefors test. Homogeneity test is carried out to obtain information whether the two sample groups have homogeneous variances or not. Hypothesis testing in this study is by using the t test. The t test used in this study is the independent sample t test.

RESULT AND DISCUSSION

This research was conducted by experimenting with visualization learning and practice on freestyle swimming speed in children aged 10-13 years at Ben Swimming Course. Overall, this activity was carried out in three stages. Namely, the first is the pretest activity to determine the initial ability of the sample; after the data is obtained, then at the same time, it is used to divide the sample into two groups, namely the visualization and practice learning group and the control group.

Table 2. Research Results of Freestyle Swimming Speed

No	Result	Kelompok			
		Visualisasi dan Praktek		Kontrol	
		Tes Awal	Tes Akhir	Tes Awal	Tes Akhir
1	N	15	15	15	15
2	Rerata	59,68	52,24	60,08	59,34
3	SD	9,78	9,06	10,13	9,46
4	Min	43,6	40,4	45,2	44,3
5	Max	76,1	70,5	79,2	73,7

The pre-test results of freestyle swimming speed in children aged 10-13 years at Ben Swimming Course in the visualization and practice learning group have an average value of 59.68 seconds, standard deviation of 9.78 seconds, the lowest value (fastest) 43.6 seconds and the highest value (late) 76.1 seconds, while for the post-test picture of freestyle swimming speed in children aged 10-13 years at Ben Swimming Course in the visualization and practice learning group

has an average value o f 52.24 seconds, standard deviation of 9.06 seconds, the lowest value (fastest) 40.4 seconds and the highest value (late) 70.5 seconds. The results of freestyle swimming speed in children aged 10-13 years at Ben Swimming Course in the visualization and practice learning group in the final test were 3 children or 20% in the very good category, 6 children or 40% in the good category, 5 children or 33.3% in the sufficient category, 1 child or 6.7% in the less category.

The results of the study of freestyle swimming speed in children aged 10-13 years at Ben Swimming Course visualization and practice learning groups.
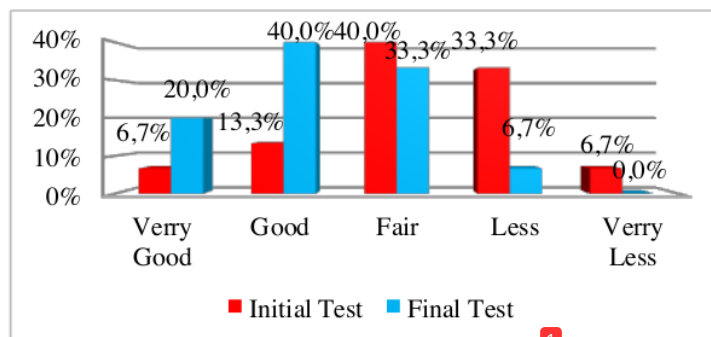

Figure 1. Results of Freestyle Swimming Speed Test of Visualization and Practice Learning Group

Shows that freestyle swimming speed in children aged 10-13 years at Ben Swimming Course visualization and practice learning group of 15 children in the initial test is as many as 1 children or 6.7% in the very good category, as many as 2 children or 13.3% in the good category, 6 children or 40% in the sufficient category, 5 children or 33.3% in the less category and 1 child or 6.7% in the very less category. The results of freestyle swimming speed in children aged 10-13 years at Ben Swimming Course in the visualization and practice learning group in the final test were 3 children or 20% in the very good category, 6 children or 40% in the good category, 5 children or 33.3% in the sufficient category, 1 child or 6.7% in the less category.

The results of the study of freestyle swimming speed in children aged 10-13 years at Ben *Swimming Course* in the control group
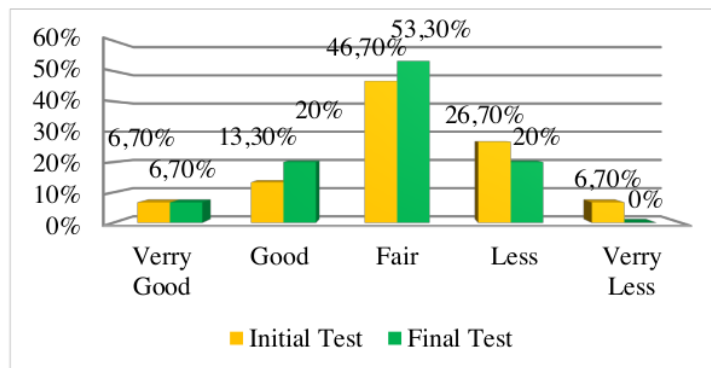

Figure 2. Initial and Final Test Results of Freestyle Swimming Speed
Control Group

Shows that freestyle swimming speed in children aged 10-13 years at Ben Swimming Course in the control group of 15 children in the initial test is as many as 1 children or 6.7% in t h the very good category, as many as 2 children or 13.3% in the good category, 7 children or 46.7% in the sufficient category, 4 children or 26.7% in the less category and 1 child or 6.7% in the very less category. The results of freestyle swimming speed in children aged 10-13 years at Ben Swimming Course in the control group in the final test were 1 child or 6.7% in the very good category, 3 children or 20% in the good category, 8 children or 53.3% in the moderate category, 3 children or 20% in the less category.

A normality test: The normality test determines whether or not the distribution occurs from the normal distribution. Before testing the hypothesis, the first step is to test the data analysis requirements with a normality test, namely using the Lilliefors test (Sudjana, 2005: 466).

Table 3. Normality Test

No	Variables	Data	L_{Count}	L_{table}	Conclusion
1	Visualization	*Pretest*	0,160	0,220	Normal
	and Practice	*Posttest*	0,168	0,220	Normal
2	Control Group	*Pretest*	0,162	0,220	Normal

	Postest	0,140	0,220	Normal

The test criteria are;
If Lcount < Ltable, then the variable is normally distributed, while if Lcount > Ltable, the variable is not normally distributed.

Homogeneity Test: A homogeneity test is conducted to determine whether the two sample groups have homogeneous variances.

Table 4. Homogeneity Test

No	Data	F $_{count}$	F $_{table}$	Conclusion
1	Initial Test	1,073	2,484	Homogeneous
2	Final Tes	1,092	2,484	Homogeneous

To find out which variables have the same variance, the test carried out is by comparing the largest and smallest variances of each group so that the calculated F value is obtained with the test criteria. If the calculated F value < Ftabel, the two data are homogeneous or come from the same variance. It turns out that the test results obtained Fcount < Ftable and the two variances are homogeneous.

Analysis of research data used to test the hypothesis using the t-test (different). The test of the effect of data from the pretest and posttest results of the visualization and practice learning groups is intended to determine whether training using visualization and practice learning affects free swimming speed.

Table 5. Effect Test of Visualization and Practice Learning Group

Data	N	Average	t $_{count}$	t $_{table}$	Explanation
Pre Test	15	59,68	13,153	2,145	There is an Influence
Post Test	15	52,24			

From the table above, it can be seen that the value of tcount = 13.153 > ttable = 2.145 significant level α 5%, degree of freedom dk = N-1 = 15-1 = 14, which means that there is a substantial difference in the pretest and posttest data of the visualization and practice learning exercise groups. Thus, it can be concluded that visualization learning and practice have a significant effect on freestyle swimming speed in children aged 10-13 years at Ben Swimming Course.

Table 6. Control Group Effect Test

Data	N	Average	t_{count}	t_{tabele}	Explanation
Pre Test	15	60,08	1,743	2,145	None
Post Test	15	59,34			Influence

From the table above, it can be seen that the value of tcount = 1.743 < ttabel = 2.145, significant level α 5%, degree of freedom dk = N-1 = 15-1 = 14, which means there is no significant difference in the pretest and posttest data of the control group. Thus, there is no significant effect of the control group on freestyle swimming speed in children aged 10-13 years at Ben Swimming Course.

Table 7. Test of Differences in *Post Test* of Visualization and Practice Learning Groupwith Control Group

Data	N	Average	t_{coumt}	t_{table}	Explanation
Visualization and Practice	15	52,24	2,100	2,048	Thre is a Significan
Control Group	15	59,34			

From the table above, it can be seen that the value of tcount = 2.100 > ttable = 2.048, significant level α 5%, degree of freedom dk = n +n$_{12}$ -2 = 30-2 = 28, this means that there is a significant difference between the data of the *post-test* results of the visualization and practice learning group with the control group.

Table 8. Test of Differences in *Post Test* of Visualization and Practice Learning Group with Control Group

Data	N	Average	t_{count}	t_{table}	Explanation
Visualization and Practice	15	52,24	2,100	2,048	There is a Significant Difference
Control Group	15	59,34			

From the table above, it can be seen that the value of tcount = 2.100 > ttabel = 2.048, significant level α 5%, degree of freedom dk = n +n12 -2 = 30-2 = 28, this means that there is a substantial difference between the posttest data of the visualization and practice learning group and the control group. When displayed in the form of a bar chart, the average posttest speed of the visualization and practice learning group and the control group appear in the bar chart as follows.
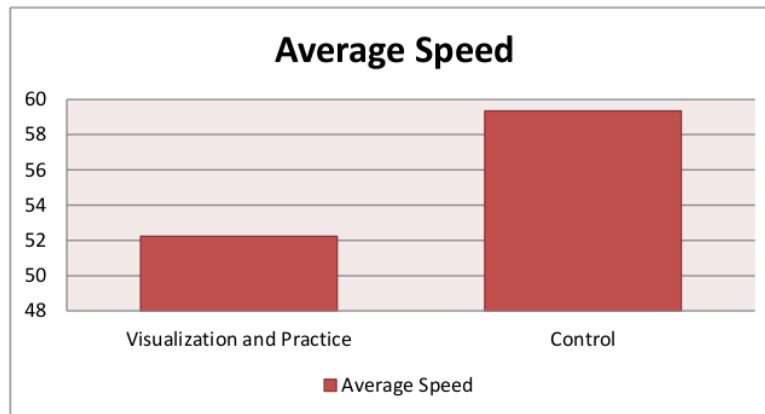
Figure 3. Average *Post Test* Speed of Visualization and Practice Learning
Group withControl Group

CONCLUSION

The analysis shows that visualization learning and practice have a significant effect on freestyle swimming speed in children aged 10-13 years at Ben Swimming Course. The t-test results show an increase in freestyle swimming learning outcomes. This is indicated by the value of t count for the skill aspect is tcoun t= 13.153 > table = 2.145, meaning there is a significant influence. Thus, the hypothesis that visualization learning and practice significantly affect freestyle swimming speed in children aged 10-13 years at Ben Swimming Course is accepted. This means that the application of visualization learning and practice significantly increases the results of freestyle swimming speed in children aged 10-13 years at Ben Swimming Course.

Based on research that has been conducted on children aged 10-13 years at Ben Swimming Course, it is known that the application of visualization and practice learning can improve freestyle swimming learning outcomes; this is because audio-visual media provides a better understanding of learning freestyle swimming, not only in physical motion experience but also experience in knowledge so that as a result students will find it easy to master freestyle swimming techniques.

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