The Influence Of Application Of Command Teaching Style Improves School Students Freestyle Swimming Learning Outcomes

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Abstract
The formulation of the problem in this study is whether there is an effect of applying the commando teaching style to improving learning outcomes in freestyle swimming? This study aims to examine the application of the commando teaching style to improving learning outcomes in freestyle swimming. The method used in this research is the experimental method. The sample used was students of SMA Negeri I Tondano for the 2022/2023 academic year, totaling 20 samples, which were divided into two groups, namely the experimental group with a commando teaching style totaling 10 samples and the control group which did not receive treatment totaling 10 samples. for one month with a frequency of three times a week. The research design used was "Randomized control group pre-test and post-test design. "The instrument used in this study was the "25 meter freestyle swimming speed test." The data collection technique in this study was to conduct an initial test and a final test in the 25 meter freestyle swimming for both groups. The research hypothesis is "The application of the command teaching style has an influence on improving learning outcomes in the 25-meter freestyle swimming at SMA Negeri I Tondano." The data analysis technique used is the t-test statistical analysis technique, before the t-test is carried out, it begins with testing the analysis requirements, namely the data normality test and the variance homogeneity test. From the calculation of the research hypothesis testing, it is obtained that tcount is 8.75. Based on the t distribution table at $\propto 0.05$ with degrees of freedom n1 + n2-2 = 10 + 10 – 2 = 18, a ttable of 2.101 is obtained. So tcount is bigger than ttable, that is tcount = 8.75 > ttable = 2.101. Based on the test criteria, if tcount is greater than ttable (tcount > ttable) then Ho is rejected, which means HA is accepted. The results of this study indicate that the average increase in learning outcomes in freestyle swimming in the experimental group using the commando teaching style is better than the average increase in learning outcomes in freestyle swimming in the control group which does not receive treatment. The conclusion of this study is that there is an effect of applying the commando teaching style to improving learning outcomes in 25-meter freestyle swimming in SMA Negeri I Tondano.

Keywords : *command teaching style, freestyle swimming*.

INTRODUCTION

Physical education is also one of the subjects taught in all educational institutions from elementary, junior high, high school to tertiary institutions. In its application, physical education is implemented through sports activities aimed at improving physical

fitness and attracting students' interest and providing a sense of fun for the students themselves. To achieve the goals of physical education, one of the efforts is to develop mastery of movement through selected sports games. One of the sports that many students like is swimming.

Swimming is a sport that can be enjoyed during free time and is healthy for the body because almost all the muscles of the body move so that all muscles develop rapidly and the strength of the swimmer increases. Over time, swimming has become increasingly popular. Swimming is also growing because it is a physical education subject in schools and many swimming clubs have been formed. With the many swimming clubs that have been formed, and also the sport of swimming has become physical education learning material in schools, it can be seen that swimming has succeeded in attracting the attention of many people around the world.

Freestyle swimming is a swimming style like the crawl movement. To do a good freestyle, not only technical skills are needed, but a high level of comfort when swimming with the chest facing the surface of the water. Therefore, to be able to do freestyle with comfort and correct technique, there are several important things that must be considered as follows: maintaining a horizontal body position, having smooth and calm hand movements when taking a breath (recovery), having hip rotation, body rotation, good shoulder lifts, consistent and strong leg kicks, efficient arm pulls and great power. In fact, according to initial observations or when participating in swimming lessons, there are still many students who have not fully mastered swimming at SMA Negeri 1 Tondano, especially freestyle. This does not mean that the teacher is unable to apply the command style method to learning freestyle swimming, but this is because there are still many students who have not been able to swim properly, especially freestyle. Based on this explanation, the researcher took the application of the freestyle variable to be studied with the hope of increasing learning outcomes for students of SMA Negeri 1 Tondano. In accordance with the requirements that have been described, for swimming 25 meters freestyle. Whether there is a contribution of commando teaching style to the learning outcomes of 25 meter freestyle swimming in swimming has not been studied in depth. Therefore it is necessary to do research on this matter as scientific information which is expected to provide input for the development of swimming learning outcomes for students of SMA Negeri 1 Tondano freestyle 25 meters.

METHODE

The research method used is experimental research method. Experimental research. The design used in this study was "pre-test and post-test randomized control group design". The location of the research was carried out in the Tondano Green Garden swimming pool for Tondano 1 Public High School students. The time of the research was carried out for 1 month with a frequency of 3 times a week, namely Monday, Wednesday and Friday, 08.00 WITA -10.00 WITA. The population is all students of SMA Negeri 1 Tondano totaling 350 people. The research sample was 10 students of class XI SMA Negeri 1 Tondano who were taken randomly (random sampling based on the theory of subject ordinal pairing.

RESULT AND DISCUSSION

The method used in this study is an experimental method with the research design used is "Pre-Test and Post-Test Randomized Control Group Design". The research instrument used was the 25 meter freestyle swimming speed test. In this study, 30 students were involved, which were divided into two groups, namely the commando

teaching style group with 15 samples and the control group with 15 samples. Group division was carried out using the ordinal pairing subject technique using pre-test data for 25-meter freestyle swimming speed.

This technique was carried out to make the two groups initially the same or equivalent so that if there was a change at the end of the study it was caused by the treatment given. Furthermore, the experimental group was given treatment through the 25-meter freestyle swimming learning process using the command teaching style for 1 (one) month with a frequency of 3 times per week, while the control group was not given treatment. After that, a post test was carried out on both groups to see the progress of learning. The data analyzed were obtained from the pre-test and post-test results of the 25-meter freestyle swimming speed from the two groups. The full measurement results data can be seen in the following table:

Table 4.1. Pre-test data for the 25 meter freestyle swim in the experimental group.

No Sampel	Pre Test	Post Test	Selisih
1	1.52.29	1.51.42	0.87
2	1.40.75	1.39.50	1.25
3	1.56.47	1.55.32	1.15
4	1.45.15	1.43.73	1.42
5	1.35.45	1.34.25	1.20
6	1.48.65	1.47.12	1.53
7	1.48.99	1.48.02	0.97
8	1.50.82	1.49.09	1.73
9	1.42.10	1,41.24.	0.86
10	1.45.38	1.44.40	0.98

Table 4.2 Pre-test data for the control group 25 meter freestyle swimming.

No Sampel	Pre Test	Post Test	Selisih
1	1.52.87	1.52.75	0.12
2	1.38.10	1.38.37	-0.27
3	1.48.28	1.48.02	0.26
4	1.44.65	1.43.80.	0.85
5	1.46.79	1.46.61	0.18
6	1.47.12	1.47.03	0.09
7	1.37.52	1.37.72	-0.20
8	1.49.58	1.49.50	0.08
9	1.42.91	1.42.13	0.78
10	1.54.91	1.53.14	1.77

Table 4.3. The statistical magnitude of the pre-test data for the two groups

No Sampel	(X1)	(X1)
1	0.87	0.12
2	1.25	-0.27
3	1.15	0.26
4	1.42	0.85
5	1.20	0.18
6	1.53	0.09
7	0.97	-0.20
8	1.73	0.08
9	0.86	0.78
10	0.98	1.77

Table 4.4. Gain Score data for both groups

(X1)	(X2)
n = 10 $\bar{X}1$ = 1.46 Sdx1 = 0.0614 Sdx12 = 0.0036	n = 10 $\bar{X}2$ = 1.46 Sdx2 = 0.0569 Sdx22 = 0.003237

To obtain statistical quantities that will be used in data analysis. Then the sum of the average standard deviation scores, the number of samples and the square of the standard deviation of the two groups was calculated using the calculator program fx-3600 p, the calculation results are obtained as follows:

Table 4.5. Gains Score Statistics for Both Groups

(X1)	(X2)
n = 10 $\bar{X}1$ = 1.596 Sdx1 = 0.32 Sdx12 = 0.106760	n = 10 $\bar{X}2$ = 0.226 Sdx2 = 0.37 Sdx22 = 0.142648

To test whether there are differences in the effect of the commando teaching style on the learning outcomes of freestyle swimming at SMA Negeri 1 Tondano, an analysis using different test statistical techniques was used for the two samples. To determine the appropriate test analysis, it begins with testing the analysis requirements that must be met, namely the data normality test using the Lilliefors test and homogeneity using the largest variance test against the smallest variance.

To test whether the sample comes from a normally distributed population, a data normality test is performed using the Lilliefors test. Data normality testing is carried out with the following steps:

First Step: Determine the Testing Hypothesis

Ho: the sample comes from a normally distributed population

HA: samples come from populations that are not normally distributed

Step Two: Determine Test Criteria

Accept HO if Lo ≤ Lt

Refuse HO if *Lo* > Lt

Significanse level ∝ 0,05

Third Step: Calculate Zi, F(Zi), S(Zi) and the Difference Between F(Zi)-S(Zi) and enter into the table.

Known: $\bar{X}1$ = 1.46 Sdx1 = 0.06

Table 4.6 Calculation of Normality Test Data pre test freestyle swimming 25 meters experimental group.

No	X	Z_i	F (Z_i)	S (Z_i)	F (Z_i) – S (z_i)
1	1.35.45	-1.75	0.0401	0.1000	0.0599
2	1.40.75	-0.87	0.1841	0.2000	0.0159
3	1,42.10	-0.65	0.2578	0.3000	0.0442
4	1.45.15	-0.14	0.4443	0.4000	0.0443
5	1.45.38	-0.10	0.4602	0.5000	0.0398
6	1.48.65	0.44	0.6700	0.6000	0.0700
7	1.48.99	0.49	0.6829	0.7000	0.0171
8	1.50.82	0.80	0.7891	0.8000	0.0109
9	1.52.29	1.04	0.8508	0.9000	0.0492
10	1.56.47	1.74	0.9591	1.0000	0.0409

Fourth Step: Summing up the Calculation Results
From the calculation of the data normality test, the highest difference or L observation value is 0.0700. Based on the critical value table L table Lillifors test at ∝ 0.05 with n = 10, found L table worth 0.258. So L observations are smaller than L tables, namely Lo = 0.0700 < Lt = 0.258. Based on the test criteria if Lo < Lt then Ho is accepted. Thus the conclusion of the test is that the sample comes from a normally distributed population.
To test whether the sample comes from a normally distributed population, a data normality test is performed using the Lillifors test. Data normality testing is carried out with the following steps:
First Step: Determine the Testing Hypothesis
Ho: the sample comes from a normally distributed population
HA: samples come from populations that are not normally distributed
Step Two: Determine Test Criteria
Accept HO if Lo ≤ Lt
Refuse HO if $Lo >$ Lt
Significance level ∝0,05
Third Step: Calculate Zi, F(Zi), S(Zi) and the Difference Between F(Zi)-S(Zi) and enter into the table.
Known: $\bar{X}2$ = 1.46
Sdx2 = 0.05

Table 7 Calculation of Normality Data pre test freestyle swimming 25 meters Control group

No	X	Z_i	F (Z_i)	S (Z_i)	F (Z_i) – S (z_i)
1	1.37.52	-1.69	0.0455	0.1000	0.0545
2	1.38.10	1,58	0.0571	0.2000	0.1429
3	1.42.91	-0.61	0.2709	0.3000	0.0271
4	1.44.65	-0.27	0.3936	0.4000	0.0064
5	1.46.79	0.15	0.5596	0.5000	0.0596
6	1.47.12	0.22	0.5871	0.6000	0.0129
7	1.48.28	0.45	0.6664	0.7000	0.0336
8	1.49.58	0.71	0.7611	0.8000	0.0389
9	1.52.87	1.37	0.9142	0.9000	0.0142
10	1.54.91	1.78	0.9625	1.0000	0.0375

Dari perhitungan yang tercantum pada tabel 6, diperoleh selisih yang tinggi atau L observasi senilai 0.1429. Berdasarkan tabel nilai kritis L uji Lilliefors pada $\propto 0{,}05$ dengan n = 10 ditemukan L tabel senilai 0.258. Jadi L observasi lebih kecil dari L tabel yaitu Lo= 0.1429< Lt 0.258 berdasarkan kriteria pengujian jika Lo< Lt maka Ho diterima dengan demikian kesimpulan pengujian adalah sampel berasal dari populasi yang berdistribusi normal.

Step Four: Summarize Calculation Results

From the calculations listed in table 6, a high difference is obtained or L observations worth 0.1429. Based on the Lilliefors on L $\propto 0{,}05$ test critical value table at n = 10 it was found that the L table was worth 0.258. So L observation is smaller than L table, namely Lo = 0.1429 < Lt 0.258 based on the test criteria if Lo < Lt then Ho is accepted, thus the conclusion of the test is that the sample comes from a normally distributed population

To test the similarity of the variance of the population from the research sample, the formula is used:

$F= \frac{VariansBesar}{VariansKecil}$

Testing the homogeneity of variance is carried out with the following steps:

First Step: Determine the Testing Hypothesis

Ho: Homogeneous variance (S12= S22)

HA: Inhomogeneous variance (S12 S22)

Step Two: Determine Testing criteria

Accepr Ho if Fo $\leq$ Ft ($\propto 0{,}05; dk\ 9/9$)

Refuse Ho if Fo $\geq$ Ft ($\propto 0{,}05; dk\ 9/9$)

Step Three: Calculating F observables through formulas.

Known: Sdx1 = 0.0600

Sdx12 = 0.0036

Sdx2 = 0.0569

Sdx22 = 0.003237

$F= \frac{\text{VariansBesar}}{\text{VariansKecil}}$

$F= \frac{0.0036}{0.003237}$

= 1.1121

= 1.11 (rounded)

Fourth Step: Summing up the Calculation Results

From the calculation of the homogeneity of variance test using the largest variance test against the smallest variance, Observation is obtained with a value of 1.11. Based on the table of the critical values of the F distribution $\propto 0{,}05$ with numerator dk = 9 and denominator dk = 9, an Ftable of 3.18 is found. So F observations are smaller than F tables, namely Fo=1.11<Ft=3.18. Based on the test criteria, if Fo < Ft then Ho is accepted. Thus the conclusion of the test is that the variance of the two populations from the study sample is homogeneous.

Based on the analysis requirements test, namely testing the normality of the data and testing the homogeneity of variance, it turns out that the normal and homogeneous population thus fulfills the requirements for testing the research hypothesis through parametric tests.

The hypothesis to be tested in this study is that there is an effect of commando teaching style on the learning outcomes of the 25-meter freestyle swimming at SMA Negeri I Tondano. To test this hypothesis, it means comparing the average increase in learning outcomes in the 25-meter freestyle swimming group taught by the command teaching style with the average improvement in learning outcomes in the 25-meter freestyle

swimming group that was not treated. then the appropriate formula for it is the t test as follows:

t count= $\frac{\bar{X}_1-\bar{X}_2}{S\sqrt{\frac{1}{n_1}+\frac{1}{n_2}}}$

Where: S2= $\frac{(n_1-1)S_1^2+(n_2-1)S_2^2}{n_1+n_2}$

The steps for testing the research hypothesis are as follows:

First Step: Determine the Testing Hypothesis

Ho: The average increase in the learning outcomes of the 25-meter freestyle in the group taught by the commando teaching style is the same or smaller than the average increase in the learning outcomes of the 25-meter freestyle in the untreated group.

HA: The average improvement in the learning outcomes of the 25-meter freestyle in the group taught by the command style was better or not the same as the average improvement in the learning outcomes in the 25-meter freestyle in the untreated group. command.

The statistical hypothesis is:

Ho: $\mu_1 = \mu_2$

HA: $\mu_1 \neq \mu_2$

Step Two: Determine Test Criteria

Accept Ho if -t o $\alpha, 05$ < t < to ($\propto 0{,}05; dk = n_1 + n_2 - 2 = 10 + 10 - 2 = 18$)

Refuse Ho if -t o $\alpha, 05$ > t > to ($\propto 0{,}05; dk = n_1 + n_2 - 2 = 10 + 10 - 2 = 18$)

Step Three: Entering statistical quantities into the formula

Before being included in the t-test formula, the combined standard deviation (S) is calculated first.

Section Method (X1)	Overall Method (X2)
n = 10	n = 10
$\bar{X}1$ = 1.596	$\bar{X}2$ = 0.226
Sdx1 = 0.32	Sdx2 = 0.37
Sdx12 = 0.106760	Sdx22 = 0.142648

S2 = $\frac{(n_1-1)S_1^2+(n_2-1)S_2^2}{n_1+n_2-2}$

= $\frac{(10-1)0.106760+(10-1)0.142648}{10+10-2}$

= $\frac{(9)0.106760+(9)0.142648}{18}$

= $\frac{0.96084+1.283832.}{18}$

= $\frac{2.244672}{18}$

S2 = 0.124704

S = $\sqrt{0.124704}$

= 0.35

t count = $\frac{\bar{X}_1-\bar{X}_2}{S\sqrt{\frac{1}{n_1}+\frac{1}{n_2}}}$

= $\frac{1.596-0.226}{0.35\sqrt{\frac{1}{10}+\frac{1}{10}}}$

= $\frac{1.37}{0.353\sqrt{0{,}1+0{,}1}}$

= $\frac{1.37}{0.35\sqrt{0{,}2}}$

$= \frac{1.37}{0.35(0.447213)}$

$= \frac{1.37}{0.156524}$

$= \mathbf{8.75}$

Fourth Step: Summing up the Calculation Results

From the calculation of the research hypothesis testing, it is obtained that tcount is 8.75. Based on the t distribution table at ∝ 0.05 with degrees of freedom n1 + n2−2 = 10 +10−2 = 18, a ttable of 2,101 is obtained. So tcount is bigger than ttable, that is tcount = 8.75 >ttable = 2.101. Based on the test criteria, if -t o $\alpha, 05$ > t < to (∝ 0,05; $dk = n_1 + n_2 - 2 = 10 + 10 - 2 = 18$) then Ho is rejected. Thus the conclusion of the test is that the average increase in the learning outcomes of the 25-meter freestyle swimming group taught by the commando teaching style is better than the average learning achievement of the 25-meter freestyle swimming group that does not receive treatment.

Discussion of Research Results

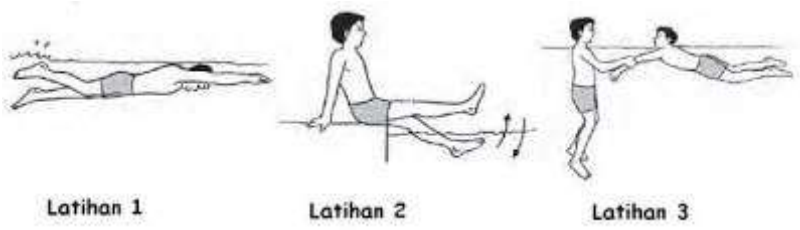
Freestyle swimming is a skill that is quite difficult because in freestyle swimming practice, the movement starts with floats and launches, hand movements. Footwork and coordination. where the swimmer launches himself in his own way then balances his body using his feet and hands. After that, what a freestyle swimmer needs is coordination and regulation of breathing, how can it be arranged in such a way that when the head is in the water it doesn't run out of oxygen. Both hands are alternately moved far forward with a paddling motion, while both legs alternately whipped up and down up and down. The application of the commando teaching style in the freestyle swimming learning process is intended so that each movement process is given special attention through the instructions given by the teacher. such as how to float, gliding leg and hand movements, as well as coordination and breathing movements. if all of these techniques have been mastered correctly it will encourage someone to be motivated to have the courage to do swimming well. Thus it can be justified that the improvement in the learning outcomes of freestyle swimming in the group taught with the command teaching style will be better than the control group.

Based on the analysis of the research hypothesis testing, it was obtained tcount of 8.75. Based on the t distribution table at ∝ 0.05 with degrees of freedom n1 + n2−2 = 10 +10−2 = 18, a ttable of 2,101 is obtained. So tcount is smaller than ttable, namely tcount = 8.75> ttable = 2.101. Based on the test criteria Reject Ho if -t o $\alpha, 05$ > t < to (∝ 0,05; $dk = n_1 + n_2 - 2 = 10 + 10 - 2 = 18$). Thus accepting Ha, which means the command teaching style has an influence on improving learning outcomes in 25 meter freestyle swimming.

Thus the results of this study provide scientific truth that the application of the command teaching style has an effect on increasing learning outcomes in the 25-meter freestyle swimming in Tondano I Public High School students.

Picture

Picture 2.1
Introduction to Freestyle Early Movement



Picture 2.2
Movement Affecting Speed and Beauty Freestyle

CONCLUSION

Based on the results of the research and discussion that has been previously stated, several conclusions can be drawn, namely as follows.

The results of testing the research hypothesis obtained tcount of 8.75. Based on the t distribution table at $\propto 0.05$ with degrees of freedom n1 + n2 - 2 = 10 + 10 – 2 = 18, a ttable of 2.101 is obtained. So tcount is greater than ttable, namely tcount = 8.75 > ttable = 2.101. Based on the test criteria, if tcount is greater than ttable (tcount > ttable), then Ho is rejected, which means HA is accepted.

Thus the conclusion of this study is that there is a significant influence of the application of the command teaching style on improving the learning outcomes of the 25 meter freestyle swimming in SMA Negeri 1 Tondano.

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