THE RELATIONSHIP OF THE LEARNING LEVEL ACCORDING TO DIFFERENT EDUCATIONAL STRATEGIES WITH SOME OF THE KINEMATIC VARIABLES OF BACK SWIMMING FOR STUDENTS

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ABSTRACT

The study aimed to find correlations between the level of learning the level of back swimming for students according to different educational strategies with some kinematic variables, where the researchers worked on taking a sample of the second stage students Department of Physical Education and Sports Science College of Isra University learned to swim back after it was divided into 3 Totals according to different educational strategies, which are the rapid education group, the cooperative education group and the motor intelligence education group, and in the final test after learning, the sample was photographed from two side and deep axes through three special cameras at a speed of 60 images / second, as Net two of them are lateral and the third is vertical from the top, and after extracting the kinematic variables from the analysis and obtaining an evaluation of the level of learning from the subject teachers, the statistical treatment and access to the result of the correlation between them The researchers concluded that the relationships focused on three variables are the angle of the shoulder and arm deviation and trunk deviation are common to the groups The three educational studies with subject teachers 'assessment of the level of students' learning in back swimming, and this indicates the importance of these variables among teachers in assessing the performance of back swimming among students.

Keywords: Educational strategies, kinematic variables, level of learning back swimming.

INTRODUCTION

Learning methods are important through dealing with the material in an educational way and presenting it in a scientific manner that enables the student to understand, express and acquire the required skills by forming an appropriate learning environment that makes the student able to learn and makes him a contributor to the educational process, especially in swimming learning, as it requires adopting different methods for Giving the learner an opportunity to think and become independent in making the learning decision and its duration in a way that makes him benefit from him in learning the skill, which makes him an effective and positive element of the lesson. Thus, we can, through the educational process, diversify the means and techniques that we use to reach the goal that we seek to achieve. One of the most important things that these strategies have emphasized is that learning is active and that the learner has a role in the educational process through the use of different learning methods such as rapid learning, learning Collaborative, learning intelligence, as well as focusing on motivation and reward

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and thus we achieve the principle of individual learner differences, which is the basis of these methods.

Swimming sport occupies a distinguished position among other sports, as back swimming occupies the third place in terms of speed among the four types of swimming after free swimming and butterfly swimming because of its technical performance, as the swimmer does not face difficulty in the process of breathing (Qusai al-Samarrai, Wehbe Alwan, 2005) The technique of this type of swimming differs from the rest of the other types of swimmers, since its beginning is from inside the pelvis, the position of the body in this type of swimming (back swimming) is similar to the body's position in free swimming, but on the back, and there is another similarity that is in the movement of the two men that are Alternating, but the difference is in the movement of the Two arms on the way to pull the arms.

The importance of the research lies in finding the relationship between the level of performance and the kinematic variables, according to various teaching methods in swimming education, using cooperative education, rapid education, and teaching intelligence that takes into account individual differences.

While the problem of research has emerged in identifying the most important kinematic variables on which subject teachers depend when assessing the level of back swimming performance for students through the researchers' follow-up to teach the effectiveness of back swimming by the subject teachers according to three educational strategies which are rapid and cooperative learning and motor intelligence and thus finding the correlation between Kinematic variables and the level of learning to swim back for the three groups.

As the aim of the study was:

- Learn about the level of learning and the kinematic variables of back swimming for students.

 - Learn about the relationship between learning level and the kinematic variables of back swimming for students.

MATERIALS AND METHODS:

The two researchers used the descriptive method. The sample was randomly chosen by selecting one division by lot, and then all those who failed and absent who knew swimming were excluded, thus 22 students were those who were approved by the research sample, thus the research sample represented (15.3%) from the original community, and table (1) shows the description of the sample In terms of height, weight and age.

Table (1)
The sample description shows height, weight, and age

Weight (kg)	Age (year)	Length (meters)	sequence
77	24	176	1
70	22	175	2
80	26	178	3
65	24	175	4
67	24	173	5
62	21	170	6
69	22	172	7
75	22	176	8
53	22	165	9
69	22	167	10

74	22	171	11
77	26	179	12
83	23	183	13
65	25	171	14
83	23	180	15
80	23	178	16
77	22	178	17
81	24	179	18
70	23	171	19
90	23	187	20
75	22	177	21
70	22	173	22

After that, the sample was divided into three groups, first by relying on the Intelligence Test Form , which indicated that there are only 6 students who have the feature of motor intelligence, and thus the first group, the group of motor intelligence, was identified, and the remaining 16 students were randomly divided into two groups. In the way of odd and even numbers, the group of even numbers became the cooperative education group and the group of single numbers is the group of rapid education.

The students' test was filmed on Sunday 2/6/2019 at four o'clock in the afternoon swimming for a distance of 25 meters, with three special cameras at the same speed, which is 60 images / second. These cameras were chosen because of their characteristics and high accuracy that make it easier for us to extract search variables. The cameras were arranged according to the location of the shooting. Camera No. 1 was the one that was photographed from the top, and Camera No. 2 was the one that was photographed from the side and the last is camera No. 3, which was photographed inside the water and from the side. A hydraulic stand was used in photographing the experiment with two copies, one for top and second photography for the side, and this enabled us to move with the student without concussion of the lens during walking with the swimmer while filming his performance in the water.

A set of kinematic variables was chosen in proportion to the nature of the study of back swimming for the research sample, which was intended to stabilize the body conditions during performance to show us the accurate reflection of the way the sample of performance of back swimming was most of the variables are angles for body parts and the study variables are (head angle, angle Shoulder joint, elbow joint angle, arm deflection angle, hip joint angle, trunk deflection angle, palm entry angle, coverage time, number of legs stroke, number of arm strokes) All of these variables were measured in two phases that are at the highest and lowest value during performance The sample for swimming Back in a distance of 15 meters, which was taken from the swimming test for a distance of 25 meters, then we adopted the rate between them, except for the number of strokes of the legs and arms, as it was calculated over the entire distance.

RESULT AND DISCUSSION:

Table (2)

It shows the values of the mean, standard deviation, correlation relationship, and the level of significance of the level of back swimming learning with the kinematic variables of the rapid learning group

Sig	Pearson	deviation	the middle	Variables
0.805	-0.105	3.292	7.375	Header angle
0.686	0.171	7.387	168.500	Facility angle
0.022	**0.783**	**2.315**	**171.25**	Shoulder angle
0.000	**-0.954-**	**3.955**	**9.75**	Arm deflection
0.797	0.109	2.900	169.875	Hip angle
0.887	-0.060	2.748	4.875	Trunk tilt
0.003	**-0.893-**	**2.712**	**6.25**	Trunk deflection
0.268	-0.446	3.196	11.750	Palm entry
0.577	0.234	21.850	60.500	Number of feet
0.279	-0.437	1.927	20.000	Arm number
0.219	-0.488	0.134	2.565	Coverage time
0.000	1.000	1.188	6.625	Learning level

Table (3)

Shows the values of the mean, standard deviation, correlation relationship, and the level of significance of the level of back swimming learning with the kinematic variables of the cooperative learning group

Sig	Pearson	deviation	the middle	Variables
0.217	-0.491	4.400	11.250	Header angle
0.839	0.086	9.658	160.125	Facility angle
0.018	**-.798-***	**7.171**	**168.5**	Shoulder angle
0.034	**-.745-***	**3.071**	**12.5**	Arm deflection
0.128	0.584	5.680	163.625	Hip angle
0.751	0.134	2.875	7.375	Trunk tilt
0.005	**-.873-****	**4.062**	**8.75**	Trunk deflection
0.420	0.333	3.623	6.625	Palm entry
0.444	0.317	20.191	63.625	Number of feet
0.697	-0.164	2.816	21.750	Arm number
0.753	0.133	0.633	2.556	Coverage time
0.000	1.000	0.926	5.500	Learning level

Table (4)

It shows the values of the arithmetic mean, the standard deviation, the correlation relationship, and the level of significance of the level of learning to swim back with the kinematic variables of the motor intelligence group

Sig	Pearson	deviation	the middle	Variables
0.018	**-.887-***	**5.419**	**22.16667**	Header angle
0.685	0.213	10.387	155.500	Facility angle
0.003	**-.957-****	**10.875**	**163.3333**	Shoulder angle
0.035	**.842***	**4.875**	**14.83333**	Arm deflection
0.195	0.614	10.821	143.500	Hip angle
0.877	0.082	3.450	14.500	Trunk tilt
0.035	**-.844-***	**6.285**	**14.5**	Trunk deflection
0.760	0.162	3.266	7.333	Palm entry
0.814	0.125	24.975	53.833	Number of feet
0.240	0.568	3.983	21.667	Arm number
0.440	-0.394	0.503	2.512	Coverage time
0.000	1.000	1.414	5.000	Learning level

Through the three tables above, which shows the results of the arithmetic circles, correlation relationships, and the level of significance, it shows us that the relationship between the learning level and the kinematic variables is only with 3 variables that are the angle of the shoulder joint and the angle of the arm deviation from the vertical line of the body path and finally the angle of the stem deviation from the vertical line of the body path This is for the two tables (2,3), that is to say the two groups, the rapid and the cooperative, more than the rapid learning group in table (4) with only one variable, which is the angle of the head.

The researchers attribute the reason for the emergence of this confined relationship only with these variables to the level of vision for the two teachers at the evaluation of students in which the front flat surface appears to them when performing and thus they will be able to see the three variables clearly and the same that was extracted from the vertical camera from the top on the student when performing (camera No. 1 on the student's deep axis). While the teacher cannot clearly see the rest of the variables due to its location when performing relative to the teaching location, meaning that the teacher will look at his assessment when assessing the most obvious body conditions using the self-visual vision and adopt it as a basis for him when assessing the level of learning for students.

As for the correlation between the learning level and the head angle, it is only in table (4) for the group of motor intelligence learning and did not appear in tables (2,3) the groups of rapid and cooperative learning. The researchers attribute the reason to the peculiarity of the group of motor intelligence that was learned through the motor games. Through the arithmetic circles of the variable angle of the head, we find the difference is clear to the head during swimming between the group of motor intelligence compared with the groups of rapid learning and cooperative learning, and we can confirm this when looking at the value of the arithmetic mean of the level of learning The dynamic intelligence group compared with the two groups of rapid and cooperative learning, we find the difference is clear in the level of learning between them and this is because the head is away from his normal position with the body level when swimming back, which made the teacher pay attention to this error and reduce the degree of To assess them at the level of learning to swim back.

CONCLUSIONS:

The researchers came out with conclusions:
- The variable of shoulder joint angle, arm deviation and trunk deviation are among the most important kinematic variables that have a strong correlation with the assessment of the level of learning to perform back swimming.
- When placing the head in an exaggerated position and far from the level of body position, this will be reflected in the

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degree of evaluation of the level of learning in back swimming.

- The teacher cannot evaluate objectively and accurately according to all the kinematic variables, and he is in a position of direct self-assessment based on eyesight only.

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