

## TRADITIONAL STRATEGIES OF DEVELOPING SPEED AND WAYS OF IMPROVING THEM

Silviu ŞALGĂU  
„Vasile Alecsandri” University, Bacău

**Key words:** swimmers, speed, improvement, variable, training

### **Abstract**

Preparing young people in our junior swimmers should become new valences quality by increasing work intensity. To make these statements I thought a small factorial experiment in which independent variable is represented by exercise 2 x (3 x 12.5 m) and dependent variable - changing the scroll speed of the contest, and 50 and 100 m. The exercise that we given as independent variable, experimental group consisted of crossing distance of 12.5 meters in 2 sets of 3 reps each departing every 45', and 3 minute break between series active - swimming 150-200 m.

### **Introduction**

**Aim** Current study aims on the one hand the benefits of training methods, and on the other hand to demonstrate, using methods of statistical research, the usefulness of this method in a competitive training.

In this context, I established myself the following main objectives:

- study the current methodology of the swimmers training short;
- adapting training methods to the peculiarities of junior age and development of physical and technical training programs that lead to increasing performance;
- preliminary study on the quality and effectiveness of training programs developed;

All these objectives have been developed to achieve the main purpose of this thesis, namely that of rethinking the use of material supporting the swimmers performance training strategy.

**Hypotheses** We believe that short samples of swimming speed will improve significantly if we identify the means and methods of traditional principles underlying mechanism of development speed and we will apply the new rules work.

If we use mainly training junior explosive sprints that launched home swimming with 12.5 m and using cord, then speed indicators will increase substantially.

We believe that introducing the above mentioned methods, then it may bear the imprint technique differentiated samples contest procedures butterfly, backstroke, breaststroke and freestyle.

### **Research methods**

1. Bibliographic documentation
2. Direct and indirect observation
3. Conversation and inquiry
4. Modelling method
5. Experimental method
6. Statistical-mathematical method

### **Place and conditions of the research**

The place where this research was conducted was the Olympic pool of the „Lia Manoliu” National and Sportive Complex.

Research subjects and criteria

The criteria for choosing the subjects were:

- For them to have an experience of at least 5-7 years;
- To have a constant presence in practice training;
- To work after a common plan, so that all of them to perform the same training drills;
- To have competitive objectives, this will give the certitude of their active participation in training;
- To be a disciplined group, promptly responding to the coach's demands.

For this experiment, I chose the athletes in the National Junior Team.

### **Conducting the research**

Research is presented as a set of activities and their outcome, conducted intentionally, deliberately and systematically and clearly, for the accumulation and processing of data (information) in a given area of work and reality and to use findings in the achieve progress in knowledge and practice in this area.

Preparing young people in our junior swimmers should become new valences quality by increasing

work intensity. To make these statements I thought a small factorial experiment in which independent variable is represented by exercise 2 x (3 x 12.5 m) and dependent variable - changing the scroll speed of the contest, and 50 and 100 m. The exercise that we given as independent variable, experimental group consisted of crossing distance of 12.5 meters in 2 sets of 3 reps each departing every 45', and 3 minute break between series active - swimming 150-200 m.

The exercise was applied 2 times a week (Monday and Thursday), because it is not appropriate at this age, to abuse the exercises to develop speed.

Also, in this experiment we used a cordlike type cord, with the objectives:

- Increasing the strength
- Improving the arms' traction
- Making the arms' action parameters symmetrical
- Correcting the parameters that intervene in the specific movement (traction force, action time, recovery time)

Exercise with cord I applied on days when we used the method on explosive sprint distance of 12.5 m, i.e., on Tuesdays and Fridays, according to the following exercise: 2 series of 3 reps over 30' using 1 a break 'after each iteration and 3' after each number. Fasten with a cord belt middle swimmer body and the other end of the block home, between these two points of attachment is a force transducer. Thus, the goal of the application is to purchase in electronic format advancing force, manifested by a swimmer in real conditions, i.e. in pool.

The solution includes two components, hardware and software.

Hardware consists of a power transducer SCAIME (maximum load for force transducer is -500 kg), a signal conditioning (filtering and signal amplification) and a data acquisition system type ActorEx, connected through USB ( Universal Serial Bus) computing system for signal acquisition power, and that a video camera for image acquisition. Components of software perform data acquisition system and ActorEx from any video source connected to the computer, processing data received in real time and the result shows the athlete.

### **Conclusions**

1. Summarizing all the results, we can appreciate that the method of training that is the subject of this paper is an intensive method that gives immediate results or in a relatively short period of time, which generates the registration of any notable differences between subjects who applied them towards those who classical training is applied.

2. At the same time, this method offers the possibility of specific diagnosis of each swimmer in a relatively short period considering that it leads to rapid stratification of the community in which it is applied, which enables the adaptation of individual training.

3. The pace of progress when applying the method of face is very large, it can provide rapid entry form on the sport as obtaining notable results in sports competitions. Otherwise this method should be used routinely to narrow in periods of training ahead of competition of major importance.

4. The test shows that significant results are obtained regardless of the browser process distance.

5. This paper was meant as a statement of the role of information in alternative and complementary methods of sports training in general and specific application in swimming.

6. Information is the foundation of all approaches to knowledge, regardless of field. In performance sport, but important information gets increasingly higher order starting from the information of genetic, biochemical, physiological and to the information provided and supported by elements of technology, structure and methodology that tend to win more ground in sports training.

7. Reconstruction of the trajectories allowed a graph plotting the next step displacement, velocity and acceleration depending on time.

8. Based on information obtained could make a correlation between arm position and velocities and accelerations developed athlete in every moment of a complete cycle.

9. This information is useful for coaches to correct technical deficiencies that can not be emphasized by other means.

10. At the end of the analysis and conclusions we can say that this research confirms the hypothesis that - we proposed to study that helped clarify some images that show trends in the collectivises statistical observation subject and the method and statistical procedures are particularly useful study phenomena in sports, which bring added knowledge and intimate understanding of nature and especially the way the evolution of these phenomena.

Initial Testing	Athlete	
Average	1	9.62
Average digression		1.37
Variability coefficient %		14.22
Average	2	8.96
Average digression		0.91
Variability coefficient %		10.19
Average	3	10.37
Average digression		1.03
Variability coefficient %		9.92
Average	4	9.30
Average digression		1.42
Variability coefficient %		15.28
Average	5	8.36
Average digression		0.78
Variability coefficient %		9.33

  

Initial Testing	Athlete	
Average	1	9.29
Average digression		1.36
Variability coefficient %		14.65
Average	2	9.00
Average digression		1.77
Variability coefficient %		19.65
Average	3	7.95
Average digression		1.41
Variability coefficient %		17.77
Average	4	7.75
Average digression		1.31
Variability coefficient %		16.90
Average	5	6.24
Average digression		1.43
Variability coefficient %		22.88

## STRATEGII TRADIȚIONALE DE DEZVOLTARE A VITEZEI ȘI POSIBILITĂȚI DE PERFEȚIONARE ALE ACESTORA

Silviu ȘALGĂU

Universitatea „Vasile Alecsandri”, Bacău

**Cuvinte cheie:** înotători, viteză, perfecționare, variabilă, pregătire

### Rezumat

Pregătirea tinerilor inotatori juniori de la noi ar trebui sa capete noi valente calitative, in sensul cresterii intensitatii de lucru. Pentru a putea face aceste afirmatii am gândit un mic experiment factorial in care variabila independenta este reprezentata de exercitiul 2 x (3 x 12 , 5 m), iar variabila dependenta - modificarea vitezei de parcurgere a probei de concurs , respectiv 50 si 100 m. Exercițiul pe care l-am administrat sub forma variabilei independente, grupei experiment, consta din parcurgerea distantei de 12,5 m in 2 serii de cate 3 repetari fiecare cu plecare la 45', iar intre serii 3 minute pauza activa - inot 150-200 m.

### Introducere

**Premisele cercetării** Lucrarea de fata isi propune pe de o parte sa evidentieze avantajele metodei de antrenament, iar pe de alta parte sa demonstreze, utilizand metode ale cercetarii statistice, utilitatea acestei metode in cadrul unui antrenament competitional .

In acest context, mi-am stabilit ca obiective primordiale urmatoarele:

- studierea metodologiei actuale de pregătire a înotătorilor pe distanțe scurte;
- adaptarea unor metode de instruire la particularitățile de vârstă a juniorilor și elaborarea unor programe de pregătire fizică și tehnică care să conducă la creșterea capacității de performanță;
- studiu preliminar privind calitatea și eficiența programelor de instruire elaborate;

Toate aceste obiective au fost elaborate pentru atingerea scopului principal al acestei teze, si anume acela de regândire a utilizării materialelor ajutătoare în strategia instruirii înotătorilor de performanță.

### Ipotezele de lucru

Credem că viteza în probele scurte de înot se va îmbunătăți simțitor dacă vom identifica în cadrul