

Scottish International Conference on Multidisciplinary Research and Innovation – SICMRI 2025

FUNDAMENTALS OF THE METHODOLOGY OF TEACHING YOUNG TRAINERS SWIMMING

Seyitmuratov Bayram Ametovich

Master of Alfraganus University

Abstract. Training in swimming should begin with theoretical foundations, the formation of conceptual apparatus for the considered type of activity. undefined undefined The ability to be in the water without movement and in a floating state is extremely important. Mastering the initial skills of holding your body in the water will allow you to relax, especially during moments of psychogenic tension, and subsequently learn to swim.

Keywords: water, breaststroke, rabbit, technique, training, swimming, buoyancy.

A person's physical potential is determined by many factors of a biological and social nature. undefined Today, it is well known that a person's motor sphere is strictly hereditarily predetermined for the entire period of their individual life. Such an understanding fundamentally changes the essence of the targeted directives of physical education and sports training. In this regard, one of the main tasks is to assist the body in realizing its hereditary motor potential.

To understand the essence of human physical activity, it is necessary to possess scientific knowledge about the natural laws of human physical potential development. This history of movement development is rich. In essence, since the beginning of life on Earth, the ability to actively move in space has become one of the fundamental mechanisms of adaptation to the surrounding external environment. undefined The complication and improvement of motor tasks for millions of years proceeded in parallel with the complication and improvement of the nervous system.[1]

The best was inherited from generation to generation. Currently, a multi-level motion control system operating on a "vertical" principle is known. It represents a "multi-story structure," where the lower levels of movement control not only ensure the solution of a certain range of motor tasks but also serve as a background for constructing more complex movements.

One of the most ancient forms of movement is water locomotion. Information about them is embedded in the human genotype, which is confirmed by the presence of an innate swimming reflex. At the same time, the levels of swimming movements are located in the "lower floors" of the central nervous system. That is why today most schoolchildren cannot swim. This indicates that they have serious deviations in physical development and possibly in mental development.

Mass swimming instruction can be organized in open swimming pools, summer sports and health camps, and on the beaches of rivers, lakes, and seas. The training should begin with elementary laws of physics. According to these laws, the gravitational forces acting on a person in water are directed vertically downwards, while the hydrostatic pressure forces are perpendicular to the body surface at all points. The force of gravity is constant in magnitude and is located within the body's volume.

For the swimmer's body to maintain its horizontal swimming position during movement, compensatory leg movements must be performed. Practice shows that qualified swimmers have good horizontal swimming ability. Many of them can remain motionless on the water surface for a sufficiently long time in a horizontal position. If we take an ordinary person, he cannot remain in a horizontal position for a long time: his legs sink, the body stretched horizontally gradually transitions to a vertical position.

Scottish International Conference on Multidisciplinary Research and Innovation – SICMRI 2025

Buoyancy depends on a wide range of different factors. These include: water density, human body type, the swimmer's posture in water, the distribution of subcutaneous fat, the degree to which the lungs are filled with air, and others.

The density of water depends on its salt content. That is why floating is higher in seawater, the density of which is generally higher than the density of the human body. They say that in some places on the seashore, one can lie down on the water and even read a newspaper. The average density of the human body is determined by the ratio of bone, fat, and muscle tissues. Fat density is slightly lower than muscle density. The most heavy is bone tissue (especially tubular bones). undefined The predominance of fat tissue in this ratio contributes to increased floating capacity. Fat deposition is a specific feature for swimmers, and not only the quantitative characteristics of the subcutaneous fat are of interest, but also the type of its distribution. Swimmers are distinguished by the lower location of fat on the legs and the special nature of its distribution in general.[2]

The simplest test for buoyancy is as follows. After the subject takes a full deep breath, they are fixed in a vertical floating position with arms raised. A qualitative assessment is given: if the hands (possibly part of the forearms) are visible above the water, the buoyancy is positive or relatively good. With negative buoyancy, the person is completely submerged underwater. If the fingertips of the hands extended vertically upward barely touch the water surface, the buoyancy is neutral.

Studies conducted on large samples provide strong evidence to conclude that 85% of people have positive buoyancy. The human body is predisposed to water, and with timely swimming instruction, drowning becomes practically impossible.[3]

The ability to remain motionless and afloat in water is extremely important. It is static swimming that provides the opportunity to rest on the water, especially in moments of psychogenic tension. Elementary exercises for mastering such a skill are "float," "jellyfish," "star," and "arrow." It is advisable to start learning the resting posture in a supine position when there are no waves. To ensure a stable balance in the water, it is enough to extend your straight arms behind your head. This will shift the center of gravity slightly closer to the head, placing it near the general center of pressure. If this is not enough (if the legs still continue to sink), you can stick your fingers or hands out of the water. The legs will immediately float up and appear above the water surface.

Sometimes, it's enough to spread your arms slightly to the sides or widen your stance. Alternatively, you can simply bend your knees to achieve the same balancing effect. This way, we can identify the prerequisites for the most efficient methods and techniques of moving through water. This significantly simplifies the understanding of swimming techniques.

1. The system of conditions under which a swimmer's movements occur has its own peculiarities and specifics.
2. Due to the high density of the water, the swimmer's movements must have pronounced strength support.
3. Since the support in water is mobile, special organization of forces is required.
4. The swimmer's movements should be economical. To do this, you need to know and follow the rules:
 - body position should be smooth throughout the entire cycle of movements;
 - working movements must be performed with acceleration;

Scottish International Conference on Multidisciplinary Research and Innovation – SICMRI 2025

undefined

- the most effective contact of the motor with stationary liquid particles;
- the driver's position must be optimal relative to the direction of the movement performed by the swimmer;
- under other equal conditions, the "horizontal component" should be more significant than others;
- to create a greater draft force, the area of the working surfaces must be greater.

One of the main aspects of physical education, like any education or any other pedagogical process, is teaching, which includes the instructional activities of the teacher and the educational-cognitive activities of students. Along with general didactic provisions, teaching and learning in swimming are characterized by their specific features, which are determined by the fact that the subject of training is the specific motor actions of the swimmer. They form the basis of movement in water.

The patterns of movement in water are most vividly reflected in the technique and methods of sports swimming. It is within the framework of sports that swimming techniques have been most significantly improved and have reached their highest level of development. Only a person who systematically engages in sports training can achieve the highest perfection in sports swimming technique. The constituent elements, the sequence of exercises, and the goal of sports training are tasks that the methodology of training and sports training deals with.

The most common method of teaching swimming is the integral-separate method.[4] For beginners, it is recommended to use special preparatory exercises for mastering with water, and when teaching swimming techniques, it is recommended to divide them into separate movements, performing each element first on land, then in water.

The methodological scheme for teaching any swimming technique or element of technique is as follows:

- demonstration of the method or element as a whole;
- brief analysis of the execution technique;
- methodological instructions with motor tasks;
- practical execution on land and in water.

The fundamental task that every student must first address is ensuring the optimal body position in the water. This initial position serves as the working posture for swimming. This requirement is dictated by the specific conditions in which a swimmer's movements are performed (mobile support, breathing peculiarities, extremely high water density, etc.). Such a task is successfully accomplished largely through leg movements (alternating, simultaneous, and others). Another equally important task is learning proper breathing coordinated with movements. The fundamentally different breathing pattern in the aquatic environment requires great attention to this technical element during training, with constant study and improvement of breathing. It's not for nothing that they say: "Whoever learns to breathe in water will learn to swim".

Taking this into account, it is recommended to construct the scheme of sequential connection of technical elements into a single whole as follows:

Scottish International Conference on Multidisciplinary Research and Innovation – SICMRI 2025

- studying leg movements;
- studying hand movements;
- study of respiration;
- studying leg movements in coordination with breathing;
- studying hand movements in coordination with breathing;
- swimming with the help of arm and leg movements without breathing;
- swimming in full coordination.

Taking into account the specific features of swimming (movements are performed in an unfamiliar for a person horizontal position without support), each exercise during the learning process should be performed in gradually increasingly complex conditions. The vast experience of teaching swimming is reflected in the thoughtful transition from performing exercises in a familiar vertical position on land to performing them in an unfamiliar horizontal position in water, gradually reducing the area of support and increasing the dynamism of the exercise.[5]

Each exercise is examined according to the following methodological framework:

- familiarization with the movement in general terms (conducted on land);
- learning the exercise in water, with support, in place (at the pool edge, using the bottom, shore, etc.);
- learning the exercise in water, with support, in motion (walking, with the support of a partner, with a swimming board, etc.);
- learning the exercise in water, without support, while moving (gliding, swimming).

Thus, swimming as a subject of study is a field of knowledge that studies the laws of interaction of the swimmer's body with water (the environment in which their motor actions are organized). The study of such interaction is due to the need to form motor skills that would allow moving in the aquatic environment in the most effective ways without special devices and supporting means.

In conclusion, the fundamentals of the methodology of teaching young trainers swimming are based on a scientifically grounded combination of pedagogical, biomechanical, and psychological principles. Effective preparation of young trainers requires not only mastery of swimming techniques but also a clear understanding of teaching strategies, safety protocols, and age-appropriate training loads. Analysis of academic literature shows that the learning process becomes significantly more effective when trainers apply differentiated instruction, progressive skill development, and biomechanical feedback mechanisms.

The development of young trainers should be carried out in stages: from mastering basic aquatic skills and stroke mechanics to planning training sessions and evaluating athletes' performance. A competence-based approach ensures that young trainers acquire the ability to independently organize training processes, apply error-correction techniques, and use objective monitoring methods. Psychological preparation also plays a critical role, as young trainers must develop communication skills, motivational strategies, and the ability to ensure a safe and supportive environment for young swimmers.

Scottish International Conference on Multidisciplinary Research and Innovation – SICMRI 2025

The findings indicate that structured methodology and pedagogical guidance significantly improve trainers' professional readiness. Thus, incorporating theoretical knowledge with guided practical experience forms the foundation of an effective training program for young swimming trainers. Ultimately, methodologically competent young trainers contribute to higher performance outcomes, injury prevention, and sustainable interest in swimming among athletes.

References

1. Оноприенко Б. И. Биомеханика плавания. Киев: Здоровья, 1981. 192 с.
2. Каунсилмен Д. Е. Спортивное плавание / пер. с англ. Л. П. Макаренко. М.: Физкультура и спорт, 1982. 208 с.
3. Меньшуткина Т. Г. Теория и методика оздоровительного плавания женщин разного возраста: дис. ... д-ра пед.наук / Т.Г. Меньшуткина. СПб.: ГАФК им. П. Ф. Лесгафта, 2000. 332 с.
4. Меньшуткина Т. Г. [и др.]. Тренажеры и приспособления в занятиях оздоровительным плаванием: учебное пособие. СПб.: ГАФК им. П. Ф. Лесгафта, 2001. 44 с.
5. Плавание : учебник для вузов / под общ. ред. Н. Ж. Булгаковой. М.: Физкультура и спорт, 2001. 241 с.