



# Teaching students at a management university to swim with the aim of reducing motor dysfunctions caused by a fear of water

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## Abstract

**Objective of the study** is to experimentally substantiate methodological techniques that help overcome fear of water among students at a management university.

**Methods and structure of the study.** The sample for the scientific study included 65 university students majoring in management, aged  $19.5 \pm 0.7$  years, who did not know how to swim. To measure the level of fear of water, a fear factor questionnaire was used, adapted to the process of learning to swim and consisting of 10 questions. Basic swimming skills were taught over a period of six weeks, with three 60-minute lessons per week.

**Results and conclusions.** Teaching basic swimming skills leads to a reduction in fear of water. The development of mental qualities in learners, such as endurance and self-control when in the water, is possible through the use of teaching methods for basic swimming skills, which expand the practical scope of their application in an aquatic environment.

**Keywords:** *fear of water, swimming lessons, students, motor dysfunction, teaching methods.*

**Introduction.** As a unique human activity in an aquatic environment, the ability to swim is a basic skill for performing many professional and practical tasks. The process of learning to swim is characterized by a multifunctional approach to mastering movements in an aquatic environment [5]. Swimming skills are important both for saving one's own life and for rescuing people in distress in the water [6]. Games in the aquatic environment have great potential for the physical development of children, so swimming skills can be developed at an early age [3].

At the same time, an unfamiliar aquatic environment can cause negative, uncontrollable psychological and physiological reactions that adversely affect learning productivity [2].

When teaching students to swim, negative emotions may arise, causing certain physiological and motor dysfunctions that negatively affect the acquisition of swimming skills [4]. Overcoming fear of water when

teaching basic swimming skills is an important task in physical education for students [1].

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**Methods and structure of the study.** The sample for the scientific study included 65 university students majoring in management, aged  $19.5 \pm 0.7$  years, who did not know how to swim.

To measure the level of fear of water, a fear factor questionnaire adapted to the process of learning to swim and consisting of 10 questions was used. The answers were graded on a 5-point scale as follows: 'I am very afraid of water' – 5 points; 'I am quite afraid to enter the water' – 4 points; 'I am moderately afraid of water' – 3 points; 'I have a slight fear of water' – 2 points; 'I have no fear of the aquatic environment' – 1 point.



Basic swimming skills were taught over a period of six weeks, with three 60-minute lessons per week. The lessons included a preparatory part (warm-up exercises on land), a main part (solving educational and applied tasks in the water) and a final part (bringing the body to a relatively calm state).

Basic swimming skills included:

- contact with the aquatic environment: getting used to water, diving under water with eyes closed and open in the shallow end of the pool, walking and running forwards and backwards, jumping out of the water;
- using the buoyancy of water: lying on the water in a group, lying on the surface of the water in a prone and supine position;
- maintaining a horizontal streamlined body position: gliding by pushing off from the side of the pool in a prone and supine position.
- the skill of synchronizing breathing and using positive buoyancy;
- the skill of staying upright in the water by alternating leg movements ('walking in the water');
- jumping into the water from various positions;
- skills of swimming the front crawl without taking your arms out of the water;
- skills of swimming and resting on your back.

**Results of the study and discussion.** The results of the study indicate that the development of basic swimming skills significantly reduces the level of fear of water.

The average value of subjective perception of water phobia factors in the formation of basic swimming skills decreased from 3.8 points to 1.8 points, which corresponds to the practical absence of negative perceptions of the aquatic environment and ensures

reliable mastery of sports swimming techniques. The recorded decrease in fear of water, assessed on the scale of the adapted questionnaire of fear factors, correlates with the skills of using the buoyancy of water, maintaining a horizontal streamlined body position, breath synchronization using positive body buoyancy, staying upright in the water by alternating leg movements, jumping into the water from various positions, swimming the front crawl without taking your arms out of the water, and resting on your back.

The emphasis on awareness of reliable safety measures on the part of the instructor and practical familiarization with the properties of water through differentiated exercises performed in shallow and deep parts of the pool formed a sense of conscious confidence when in the water. This confirms that mastering practical swimming skills has a positive effect on the psychological state and emotional stability of those involved.

Taking into account the psychological characteristics, abilities and inclinations of students fosters a sense of confidence, awareness and protection from the stressful factors of the aquatic environment. Monitoring decision-making and providing assistance from the instructor increases the effectiveness of managing the current and general psychological state of students when they are in an unfamiliar environment performing motor actions. Based on the predicted outcome, the instructor includes a combination of differentiated exercises in the training program aimed at overcoming the students' fear of the most negatively perceived factors of aquaphobia.

The use of diverse and universal support tools that increase positive buoyancy at the initial stage of training helps to overcome fear of water through a feedback

Table 1. Dynamics of subjective perception of factors contributing to fear of water

Factors contributing to fear of water	Before	After	t	p
Lifting objects from the bottom of the shallow end of the pool with a depth of 0.8 m	4,1±0,2	1,3±0,9	4,4	< 0,05
Lifting objects from the bottom of the pool with a depth of more than 2 m	4,2±0,5	2,2±0,5	3,6	< 0,05
Games in the shallow end of the pool with waves and splashes	2,8±0,3	1,9±0,6	3,7	< 0,05
Diving into the water with head	2,3±0,7	1,9±0,3	2,4	< 0,05
Jumping into the water from a height of 1 m	4,6±0,2	2,3±0,5	4,8	< 0,05
Opening eyes in the water while swimming	3,4±0,2	1,6±0,5	2,2	< 0,05
Swimming when there are no other swimmers in the lane	3,9±0,9	1,8±0,7	3,1	< 0,05
Swimming when the bottom is not visible	4,3±0,1	1,4±0,3	3,5	< 0,05
Resting on back when tired	4,8±0,8	2,8±0,2	3,7	< 0,05
Climbing out of the water using a ladder with jumping movements	3,6±0,3	1,2±0,1	2,6	< 0,05



cycle. This task is accomplished on a new instrumental basis – by strengthening the internal connections between the acquisition of basic swimming skills and the reduction of fear of the aquatic environment. New opportunities for programming a positive psychological state and confidence in one's own abilities are achieved by moving to a higher level of mastery of basic swimming skills and simulating practical conditions for their application.

The use of free activities and games in the water stimulated adaptation and a positive response from students, reducing their level of anxiety in the aquatic environment. There is a noticeable trend of psychological stimulation associated with the concentration of trainees on the immediate mastery of swimming skills. The resources for mastering basic swimming skills have expanded the possibilities for overcoming fear of water and improving the overall psychological state of students.

**Conclusions.** Teaching basic swimming skills leads to a reduction in the level of fear of water. The development of mental qualities in learners, such as endurance and self-control when in the water, is possible through the use of teaching methods for basic swimming skills, which expand the practical scope of their application in an aquatic environment.

The versatility of basic swimming skills is reflected in their multifunctional application and stimulates the integrated development of sports swimming techniques and water environment competencies, which are of high practical importance.

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