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# Managing the Development of Physical Qualities in 14-15-Year-Old Students Based on Innovative Technologies

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### **Abstract**

This article briefly describes the content of managing the development of physical qualities in 14-15-year-old students based on innovative technologies.

Keywords: 14-15-year-old student, physical quality, system, movement, education, strength, quickness, endurance, agility.

Historically existing systems of physical education have been assessed based on their ability to educate human physical qualities. Strength, quickness, endurance, agility, mobility of body joints and flexibility of muscles formed in the human body at different levels are accepted as physical qualities. Depending on how the human body can manifest these qualities, an individual can be strong, agile, fast, etc. those who rated it as These qualities have a measure, its indicators are called indicators of physical fitness, and the readiness of an individual for creative work and defense of the homeland is determined through the indicators. For example, an individual can sit up with a barbell weighing 100 kg on his shoulders only 3 times, while another person can sit up with this weight more than 5 times. For performing this exercise more than twice, the strength quality of the second comrade is estimated to be improved. This quality depends not only on the development of the tissues, cells and other organs of the body, but also on the spiritual and spiritual qualities. That is why education of movement qualities is closely related to education of spiritual and spiritual qualities and serves as a tool for this direction of education.

The desire to educate the qualities of action is the eternal dream of mankind. The effectiveness of working with weapons, military equipment, and weapons raises the question of the necessity of education based on the physical qualities that nature has given to man and that can be developed in the process of education.

Up to now, it has been considered one of the main tasks of our time to educate a person who is physically fit, morally clean, has aesthetic taste, faith, loyalty, who has mastered the modern basics of technical science, who is spiritually mature in all aspects, who is physically harmoniously developed. Even now, this program has not lost its importance. It is the core of the program "for a healthy generation" implemented in our country.

In conclusion, the importance and significance of physical education, in particular, the development of physical qualities, is clearly visible. It should be noted that in the development of physical qualities (strength, quickness, agility, endurance, etc.) all of them are linked together in the educational process. But in a certain type of sport, a certain quality is more strongly formed, develops, and it becomes invisible in the form of a leading movement quality. Other qualities are relatively developed, but they can appear in the form of auxiliary, auxiliary quality of action. For example, if it is considered that the quality of agility is mainly developed in basketball, speed is developed as an auxiliary quality. But basketball is also a key tool in building resilience. In

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weightlifters, the physical quality of strength is considered the leading quality. A lot of practice of "lifting (rivok)".

Physical culture is an integral part of human life. It plays a very important role in people's education and work. Physical exercise plays an important role in the activities of members of society, therefore, knowledge and skills in physical culture should be formed in primary school. School age is the most favorable period for the development of all motor skills. However, at certain age periods, the rate of natural development in changing motor skills is not the same: at different stages of growth and development, the child's body reacts differently to physical activity. It has a more and long-term effect, certain periods are called sensitive or sensitive. During these periods, the body's susceptibility to selective environmental influences increases.

Historically existing systems of physical culture were evaluated depending on the ability to culture the physical (movement) qualities of a person. Strength, quickness, endurance, agility, mobility of body parts and flexibility of muscles formed in the human body at different levels are considered to be physical qualities. According to how the human body can develop these qualities, those who are considered strong, agile, and fast have a measure of these qualities, its indicators are called indicators of physical fitness, and the readiness of an individual for creative work and defense of the homeland is determined through the indicators. For example, an individual can lift a barbell weighing 100 kg on his shoulders only 3 times, while another person can lift it more than 5 times with the same weight. Since the orthic performed this exercise twice, the strength quality of the second orthic is considered to be improved. This quality depends not only on the development of the bones, muscles and other organs of the body, but also on its spiritual qualities. Therefore, culturalization of movement qualities is closely related to culturalization of spiritual and spiritual qualities and serves as a tool for this goal of culture.

The desire to civilize the qualities of movement is the eternal dream of mankind. The effectiveness of handling weapons, military equipment and armor depends on the physical qualities that nature has given to man and that can be developed in the process of culture. If the development of physical qualities of primitive man is low, he could not see to live. Later, the formation and development of abstract thinking brought to the fore the issue of the need to cultivate a person physically and harmoniously in all aspects (mental, moral, spiritual, aesthetic, labor and other elements of culture). Cultivating a person who is physically fit, morally pure, has aesthetic taste, faith, loyalty, who has thoroughly mastered the modern basics of technical science, is spiritually mature in all aspects, and who is physically harmoniously developed has been considered one of the main tasks of our time. Even now, this program has not lost its importance. It represents the core of the "for a healthy generation" program implemented in our country.

In conclusion, the importance and importance of physical culture, especially the development of physical qualities, is clearly visible. It should be noted that in the development of physical qualities (strength, quickness, agility, endurance, etc.), the culture dictates that all of them should be connected with each other. But in a certain type of sport, a certain quality is more strongly formed and developed, and it becomes invisible in the form of a quality of leading action. Other qualities are relatively developed, but they can appear in the form of auxiliary, auxiliary action qualities. For example, if it is considered that the quality of agility is mainly developed in basketball, speed is developed as an auxiliary quality. But basketball is also a key tool in cultivating resilience. In weightlifters, the physical quality of strength is considered the leading quality. "Practice of swinging a lot develops quickness. In practice, through these exercises, we witness the development of endurance and flexibility in the form of physical qualities. In general, there are many games for developing quickness: volleyball, basketball, football, tennis, table tennis, handball., hockey, rugby, etc. In fact, the importance of speed for these houses is not secondary. Developing agility requires the ability to adapt to rapidly changing home conditions,

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observation, getting to the target, and various complex tasks in a short period of time. Lifenecessary practical action, such as coming to a clear, correct decision in a situation, making it comfortable and being able to adapt one's actions to this situation, forms skills. Lability (functional mobility) of the neuromuscular tissue involved in a specific movement. The excitability of tissues is measured by their rheobase and chronaxis. These indicators are important in evaluating the athlete's movement speed. However, in determining the quality of speed, it is now common to determine the reaction time. Special devices (for example: mioreflexometer, IPR) are used for this purpose. Speed development is especially important for sprinters and speedpower athletes. For example: a short-distance runner should cover a distance of about 10 m every second. According to current evidence, a sprinter can run 100 m in 9.8 seconds. The latent period of the athlete's movement reaction plays an important role in the implementation of such speed, because the faster the athlete jumps out from the start, the faster he starts the movement, the faster he covers the distance. The speed of alternation of the excitation and inhibition processes in the nerve centers of the antagonistic muscles is also essential for the speedy execution of dynamic work with cyclic movement. For example: the sequential speed of leg flexor and abductor muscles is determined by the time of alternation of processes (excitation and braking) in the center of the nerve controlling the work of the working muscles. The faster this process goes, the shorter the contraction and relaxation of the muscles, the higher the speed of movement. Factors such as the type of neuro-muscular movement units, the coordination of movement, and the rate of energy generation in muscles play an important role in high-speed execution of movement. The ratio of fast-moving or slow-moving units of movement during movement has a certain influence on movement speed. If there are more fast-moving units of movement in the performed movement, the higher the speed of movement. As a result of high-speed exercises, the ratio of fast-moving and slow-moving units of movement changes. Regarding the importance of movement coordination for the speed of movement, it should be said that the functional connections between muscle fibers and muscle groups, the high improvement of their coordination ensures a much higher speed of movement. It is known that exercises such as running and swimming for short distances are performed anaerobically. The energy needed to perform such exercises is mainly due to the breakdown of ATF and KrF. Therefore, the greater the amount of these substances, the higher the power of the work. It is considered that speed is largely dependent on heredity. According to the evidence given by some authors, it is shown that 80-90% of the speed of emergence is related to genetic factors. There are simple and collective forms of quickness. In the simple form - the latent (hidden) period of simple and complex movement reactions, the duration of a single movement at maximum speed includes the maximum number of simple movements.

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