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# DEVELOPMENT OF PHYSICAL QUALITIES IN PRIMARY SCHOOL STUDENTS

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**Annotation**

This article examines the priority directions in the development of physical qualities of primary school students. It provides information on the effective use of physical exercises in the physical, mental, and physiological development of children of primary school age.

**Keywords:** physical qualities, sport, speed, endurance, flexibility, ability, physical activity, movement.

## Introduction

In our republic, considerable attention is being paid to improving the organization and conduct of physical education classes; however, scientific and methodological literature does not sufficiently cover the issues of developing coordination abilities in children, as well as the specific features of improving these abilities at different age stages of a child's physical development.As a result of the reforms being implemented in the national education system, significant efforts are being made to fundamentally improve all conditions necessary for the physical development and skill formation of the younger generation and for educating a well-rounded individual, as well as to enhance the quality of education in general secondary schools based on advanced international experience.Based on the above, there is a growing need to scientifically apply new technologies in the educational process of physical education classes in schools in order to develop coordination abilities.

In recent years, a number of scholars have been studying the problems of increasing motor activity among school-aged children. In this study, the works of such authors as Bogen M.M., Germanov G.N., Zemsova I.I., Ignatov S.N., Imas E., Mingazova Y.G., Mikhaylov N.G., Mukhanova N.V., Sokolov E.S., and Solodkov A.S. were analyzed. Issues related to the development of coordination abilities during physical education classes have been addressed in the works of Uzbek scholars such as Z.S. Artiqov, M.A. Aslanova, B.G. Boybobayev, F.A. Kerimov, R.S. Salomov, T.S. Usmonxodjayev, and N.K. Ro'zmetov. In addition, the anatomical, physiological, and functional characteristics of the musculoskeletal system in the development of coordination abilities in childhood have been reflected in the scientific research of R.D. Khalmuhamaedov, D.D. Sharipova, A.K. Eshtayev, and other researchers.

One of the main tasks to be solved in the process of physical education is to ensure the full development of physical qualities inherent in human beings.

Physical qualities are defined as innate (hereditary) morphofunctional characteristics underlying purposeful motor activity in the formation of a person's physical activity. The main physical qualities include muscular strength, speed, endurance, flexibility, and agility [5].

Terms such as *"development"* and *"education (training)"* are used to describe the dynamic changes of physical qualities. The term *development* characterizes the natural changes in physical qualities, whereas the term *education (training)* implies an active and purposeful influence on the growth of physical quality indicators.

In modern literature, the terms *"physical qualities"* and *"physical (motor) abilities"* are used; however, their meanings are not identical. Motor abilities can generally be understood as individual characteristics that determine a person's motor capabilities [3].

Physical qualities form the basis of human motor abilities, while motor skills and abilities constitute the process of their formation. Motor abilities include strength, speed, speed–strength, coordination–motor abilities, as well as general and special endurance. Motor abilities develop differently in each individual. The diverse development of abilities is based on a hierarchy of various innate (hereditary) anatomical and physiological characteristics.

- anatomical and morphological characteristics of the brain and nervous system (features of nervous processes—strength, mobility, balance; individual variants of the cortical system);

- physiological characteristics (features of the cardiovascular and respiratory systems);

- biological characteristics (features related to biological oxidation, metabolism, and the power of muscle contractions);

- body-related characteristics (body height and weight, muscle and adipose tissue mass);

- chromosomal (genetic) characteristics.

The development of motor abilities is also influenced by psychodynamic characteristics, such as temperament, character or personality traits, and the features of regulation and self-regulation of mental processes.

At present, the question arises as to the expediency of universally implementing the circuit training exercise method. This method of teaching physical education classes to primary school–aged students takes into account the specific characteristics of early school age. Its complexes can also be used as homework, and subsequently selecting and testing these tasks in class enhances the effectiveness of physical education lessons. According to the literature, the circuit training exercise method, through the use of exercises, plays a significant role in improving and developing the young organism, strengthening health, and developing physical qualities.

The purpose of using the circuit training exercise method with primary school students is to determine the effectiveness of the development of the young organism and to apply appropriate means and methods in physical education classes.

The development of physical qualities of primary school–aged students through the application of the circuit training exercise method during physical education lessons.

To achieve this goal, the following objectives were set:

1. To study, analyze, and critically review the scientific literature related to primary school students.
2. To determine the indicators of the development of physical qualities among students of grades 1–4 in general secondary schools.
3. To develop an experimental methodology for using the circuit training exercise method with primary school students and to develop the motor qualities of students in grades 1–4.

During the initial stage of the research, the research hypothesis was formulated: it was assumed that the use of the circuit training exercise method in physical education classes would significantly enhance the development of physical qualities in primary school–aged children. A physical education teacher working with children of primary school age must have a thorough understanding of their anatomical, physiological, and psychological characteristics. Insufficient knowledge of the organismal characteristics of primary school students may lead to errors in the application of physical education exercises and, as a result, excessive physical loads that may adversely affect children's health.

Changes occurring in the structure and functional state of the organism in children result not only from the systematic influence of physical exercises but are also determined by age-related characteristics, which correspond to the boundaries of primary school age. At present, primary school education generally covers children aged 6–7 to 9–10 years. During this period, the psycho-physiological development and physical growth of the child require a well-organized educational system to ensure optimal development.

From the age of seven, the development of the organism and higher nervous activity in boys lags behind that of girls for approximately two years. At this age, the excitation processes of higher nervous activity possess significant strength and mobility, while balance and conditioned reflexes are sufficiently necessary and stable.

The circuit training exercise method, when applied in the teaching process of primary school students, fulfills various health-preserving, educational, and instructional tasks in a comprehensive and interrelated manner. The application of the circuit training method requires taking into account the development of motor skills and the physical qualities of children. Development associated with learning and improvement at primary school age influences both the selection of exercises and their physiological effects.

The content of the circuit training exercise method is quite simple and should include a wide range of exercises, providing comprehensive coverage and effectively influencing the main muscle groups of young children from a technical standpoint. When developing physical education programs, it is necessary to conduct an in-depth analysis and establish a connection between their content and the age-related capabilities of children.

In particular, along with overall development, general developmental exercises play a primary role in physical education lessons for children of primary school age. It is recommended to include exercises referred to as basic motor skills for schoolchildren—such as climbing, jumping, crawling, and ball-handling activities—depending on the content of the curriculum, including movements such as throwing, bouncing, and catching, as well as the use of various materials. A wide range of exercises should be applied. The necessary equipment for physical

exercises (hoops, balls, ropes, etc.), as well as exercise apparatus and various items for training (benches, gymnastic walls, balance boards, and others), should be widely used.

In the circuit training exercise method, instructional complexes of exercises are implemented, which must first be clearly understood by schoolchildren. Children should be able to perform them freely, independently, and willingly, ensuring ease of execution.

In conclusion, analyzing the interaction and interdependence of physical qualities made it possible to gain a deeper understanding of the nature of changes that occurred as a result of the pedagogical experiment. If we summarize the findings of this research, we can state with a high degree of confidence that the pedagogical experiment made it possible to significantly increase the number of reliable relationships among the physical development qualities of primary school–aged children.

The circuit training method in physical education lessons involves the use of sufficient equipment to allow all children to participate simultaneously in performing exercises. Equipment that enables the development of high motor skills increases the motor density of the lesson.

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