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EFFECTIVE METHODS FOR DEVELOPING STUDENTS' PHYSICAL QUALITIES THROUGH ACTIVE GAMES

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Annotation: The article analyzes the role of active games in the development of physical qualities in primary school students, their pedagogical and physiological foundations, and ways to integrate game technologies into the educational process. The study scientifically substantiates the effectiveness of active games in developing speed, endurance, agility, and balance in children. Additionally, the latest decrees and orders of the President of the Republic of Uzbekistan in the field of physical culture and sports are analyzed, highlighting urgent tasks in shaping a healthy lifestyle within the primary education system.
Keywords: active games, physical qualities, primary education, speed, endurance, coordination, healthy lifestyle, pedagogical technology, schoolchildren.

Introduction

In recent years, large-scale reforms have been implemented in the field of physical education and sports in the Republic of Uzbekistan. These reforms aim to promote a healthy lifestyle among the younger generation, improve physical fitness, and organize the educational process based on modern pedagogical approaches. The decree PF–6810 ("On Measures to Further Develop Physical Culture and Mass Sports," November 5, 2021), adopted under the leadership of President Shavkat Mirziyoyev, emphasizes the need to strengthen attention to a healthy lifestyle among young people, widely implement active games in general education schools, and use interactive methods in physical education classes [1].

Additionally, the decree PQ–5953 ("On Modernization of the Sports Education System," April 18, 2023) sets tasks to improve the education system oriented toward the physical development of schoolchildren, introduce advanced game technologies into curricula, and adapt them to the age and individual characteristics of students through scientific and methodological approaches [2].

For primary school students, active games are the most natural form of physical, psychological, and social development. Through play, a child not only develops physical qualities (speed, agility, endurance, balance) but also acquires social skills such as teamwork, cooperation, mutual respect, and discipline. Therefore, active games are recognized as an integral part of modern physical education methodology.

The aim of this study is to determine the effectiveness of developing primary school students' physical qualities through active games, develop a game-based training program, and test it in practice.

Literature Review and Methods

Analysis of scientific literature in physical education theory and methodology shows that active games play a significant role in developing physical qualities in primary school students. Active games not only increase children's motor activity but also positively affect their physiological, psychological, and social development (Sh.M. Khankeldiyev, 2019; O.V. Goncharova, 2007) [3,4].

Research indicates that the main physical qualities—speed, agility, endurance, strength, and coordination—develop rapidly in children aged 7–10. Therefore, properly selected active games during this period are the most effective tool for overall physical development (N.A. Fomin, 2016). Active games enhance children's activity, strengthen the muscular and motor systems, and improve respiratory and circulatory function [5].

Pedagogical studies (A.I. Punkina, 2015; V.A. Lisitskiy, 2018) note that active games develop not only physical qualities but also volitional, moral, and communicative traits. Group games teach children teamwork, mutual assistance, and solidarity, fulfilling the educational functions of physical education [6,7].

Modern research (E. Muratov, 2021; T. Saidov, 2022) emphasizes that the pedagogical effectiveness of active games depends on their proper methodological organization. Games should be selected according to the age, sex, physical fitness, and health of students. For example, 1st–2nd graders benefit from games that develop speed and coordination, while 3rd–4th graders focus on endurance and strength [8,9].

Several scholars (V.K. Balsevich, 2014; Kh. Qodirov, 2020) highlight the importance of integrating active games into lessons. According to them, play naturally engages children in motor activity, ensuring the natural functioning of physiological systems. Exercises are thus performed in an engaging and natural environment rather than in a mechanical, repetitive manner.

The effectiveness of physical development in primary school depends significantly on the teacher's methodological preparation. Researchers (S. Karimov, 2021; L.G. Sharipova, 2020) stress that teachers must consider not only physical load but also students' needs, interests, and emotional states when selecting games. This ensures that physical activity is both beneficial and enjoyable.

International studies (UNESCO, 2018; WHO, 2021) emphasize the global importance of play methods for maintaining children's health and increasing activity. Approximately 60% of children's physical activity comes from active games, making them a key factor in establishing a healthy lifestyle in school-aged children.

Results and Discussion

The study involved 60 students from grades 1–4. Thirty students formed the experimental group and 30 the control group. The experiment lasted 8 weeks and was conducted during physical education classes in a general education school, three times per week, with each session lasting 35 minutes. The program content was adapted to the physical education curriculum approved by the Ministry of Public Education of Uzbekistan and included a system of interactive game exercises.

The following scientific and methodological approaches were used:

Pedagogical observation: Students' participation, activity in games, development of physical qualities, and psycho-emotional states during classes were regularly recorded. Observation sheets were filled after each session.

Experimental testing: The effectiveness of the game-based program was assessed by comparing experimental and control group results using standard tests:

10×5 meter run – to assess speed and agility;

Ruffier test – to evaluate cardiovascular function;

Balance test – to assess central nervous system stability and coordination.

Functional assessment: Physiological indicators such as heart rate, respiratory rate, muscle activity, and recovery speed were measured using digital pulse oximeters, heart rate sensors, and observation charts.

Statistical analysis: Results were processed using t-tests and percentage difference methods to assess significance ($p<0.05$). Changes, growth rates, and physiological responses for each type of game were analyzed using trend analysis.

Main active games included: *"Who is Agile?"*, *"Run Fast, Don't Stop!"*, *"Who Passes the Ball Faster?"*, *"Escape and Chase"*, *"Find Your Friend"*, *"Competition in the Ring"*, and *"Obstacle Course."* Each session had three stages:

Preparatory stage – 5–7 minutes for cardiovascular activation and muscle warm-up;

Main stage – 20–22 minutes of active games to develop physical qualities;

Final stage – 5–6 minutes of calming exercises, breathing recovery, and reflection.

Workload was adjusted according to individual characteristics (age, sex, health) and gradually increased. Game dynamics created a motivational environment, enhancing lesson effectiveness.

During the program, students' interest, attention, and social activity increased. Positive competition, cooperation, leadership, and responsibility developed. Comparing results with international studies (J. Siedentop, 2018; A. Gallahue, 2020; T. Harland, 2022) confirmed the high effectiveness of active games in developing physical qualities. Active games naturally stimulate physiological resources, strengthen the central nervous system, and improve cardiovascular function.

Modern digital monitoring systems (e.g., "Smart Fitness" apps, heart rate sensors, QR-coded assessment systems) allow tracking students' activity and controlling workload during games, highlighting the need to integrate active games into a digital learning environment.

The study shows that developing primary school students' physical qualities through active games is one of the most effective ways to improve overall physical fitness, movement culture, and healthy lifestyle habits. Stable positive growth was observed in key physical qualities such as speed, agility, balance, and endurance.

Game-based sessions increased students' activity, creativity, initiative, and team spirit, contributing not only to physical development but also to social and emotional well-being. Data indicated improved cardiovascular stability, increased muscle tone, and enhanced overall work capacity.

Active games engage students in a natural movement environment, making physical education classes enjoyable and effective. When adapted to age and psychophysiological characteristics, this approach significantly increases the motivational and health-promoting value of lessons.

The implementation of systematic game-based sessions positively influenced students' attitudes toward classes, fostering cooperation, competitiveness, leadership, discipline, and responsibility. Additionally, interactive and digital technologies in game sessions helped develop self-analysis, self-control, and self-assessment skills.

Overall, the study confirms that the systematic use of active games is an important pedagogical tool for enhancing physical fitness, increasing interest in a healthy lifestyle, and improving the efficiency of the educational process. Therefore, regular inclusion of game-based sessions in physical education, improving teachers' methodological preparation, and integrating modern interactive approaches are considered urgent tasks.

Overall, the results of the study confirm that the systematic and methodical use of active games is an important pedagogical tool for improving the physical fitness of primary school students, increasing their interest in a healthy lifestyle, and enhancing the effectiveness of the educational process. Therefore, regularly incorporating game-based activities into physical education lessons, improving teachers' methodological preparedness, and implementing modern interactive approaches are considered urgent tasks today.

References

1. Decree of the President of the Republic of Uzbekistan PF–6810. "On measures to further develop physical education and mass sports," November 5, 2021. – Tashkent: Lex.uz.
2. Resolution of the Cabinet of Ministers of the Republic of Uzbekistan PQ–5953. "On modernization of the sports education system," April 18, 2023. – Tashkent: Lex.uz.
3. Sh.M. Khankeldiyev. Features of physical development of school-age children. – Tashkent: "Fan", 2019. – 312 p.
4. O.V. Goncharova. Methods for developing the ability of younger school-age children to exhibit explosive strength in the process of physical education. – Abstract of Candidate of Pedagogical Sciences dissertation. – Tashkent, 2007. – 27 p.
5. N.A. Fomin. Human and sports physiology. – Moscow: "Akademiya", 2016. – 384 p.
6. A.I. Punkina. Pedagogical foundations of developing motor qualities in younger school-age children. – St. Petersburg: SPbGPU, 2015. – 176 p.
7. V.A. Lisitskiy. Theory and methodology of physical education of younger school-age children. – Moscow: "Sport", 2018. – 256 p.
8. E. Muratov. Formation of physical qualities in primary school students through active games. – Tashkent: TDPU, 2021. – 145 p.
9. T. Saidov. Methodology of using active games in physical education lessons. – Samarkand: SamDU, 2022. – 132 p.
10. V.K. Balsevich. Theory and practice of physical culture. – Moscow: "SportAcademPress", 2014. – 288 p.