

# Challenges Associated With Maintaining the Continuity of Physical Education for Children during the Primary Stage in the School Education System

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## **Abstract:**

The article discusses the importance of revising the structure and content of the educational process in the school education system to address global problems related to the development of the young generation. It emphasizes the significance of physical activity in the development of children's mobility and sports skills and highlights the negative impact of physical inactivity on the health of young students. The article suggests that pedagogical control and analysis of students' physical condition during classes and extracurricular activities should be based on a unified system of concepts, terms, and measurement procedures. The article also presents the results of a sociological research study on the contingent of physical education teachers working with primary school children.

**Keywords:** young generation, education system, pedagogic science, physical activity, motor skills, mathematical analysis, pedagogical control, physical fitness, primary school age, physical education teachers.

Relevance. In the years following independence, it has become evident that there has been a lack of comprehensive scientific research under conditions similar to our regional climate. This is significant because the primary school age represents a highly sensitive developmental stage for children, making it a crucial period for enhancing and developing physical abilities.

Addressing global issues related to the development of the younger generation has become a critical task in line with the government's priority objectives for public education. This has led to a pressing need to fundamentally reassess the structure and content of the educational process within the school system. Experimental research conducted with this age group in the independent years has highlighted the neglect of this crucial period for developing children's physical capabilities.

The World Health Organization (WHO) has officially recognized physical inactivity as a social adverse factor affecting the health of the younger generation. Research and mathematical analyses reveal that physical inactivity affects 17% of students over the age of 15, with a concerning trend of further development in this area.

It is essential to emphasize that without experimental data on the initial physical capabilities of growing children in the school education system, it is impossible to effectively evaluate and plan pedagogical interventions. Any monitoring tests must begin with the understanding of which indicators to measure and how to select the most informative ones. A significant aspect of this process involves the correct mathematical processing of the results obtained from pedagogical tests. Modern physical education teachers in schools need to master methods for pedagogical monitoring and analysis of students' physical states during both class and extracurricular activities.

In our view, the logical and theoretical foundations of measurements and the evaluation of pedagogical monitoring using mathematical tools are broadly applicable across various scientific specialties. The process of conducting pedagogical monitoring requires a unified system of concepts, consistent terminology, integrated measurement protocols, and standardized rules for test selection and rating scales, which are essential for effective educational assessment.

**Objective of the Study:** The aim of this research is to evaluate the physical capabilities and preparedness of primary school students and to develop a unified scientific approach for assessing the results of comprehensive studies in physical education. This approach aligns with the government's priority objectives in public education and focuses on a fundamental re-evaluation of the structure and content of the educational process within the school system. The study also aims to prevent the negative manifestation of physical qualities in the subsequent stages of heterochronous development of abilities and to utilize sensitive and favorable age factors to develop children's physical activity for selecting sports skills.

**Research Subject:** The study focuses on the physical education process for primary school students in general education schools in the Fergana region.

Without such evidence-based processes, research results from different specialists on the same group of children cannot be compared or generalized effectively. Consequently, a theoretical foundation for applying mathematical logic in evaluating complex research results in physical education is necessary.

To determine the physical readiness of primary school children, several tests from the "Health" school physical education and health programs were selected. Monitoring studies were conducted quarterly based on the characteristics under study.

During the pedagogical experiment, 24 physical education teachers working with primary school children participated in sociological research.

The distribution of physical education teachers in lower grades of the school system showed that those with up to 5 years of experience work with 37.4% of this age group, 6 to 10 years of experience with 36.7%, 11 to 14 years with 15.3%, 16 to 20 years with 7.8%, and those over 20 years with 2.8%.

In most educational institutions, conditions for physical education classes and various sports activities are rated as satisfactory (57.4%), good (20.0%), meeting necessary requirements (3.4%), and focused on health improvement (17.8%).

It has been found that in 28.7% of schools, physical education equipment is fully available, while in others, only some elements are present. This indicates a lack of qualified sports and recreational activities for primary school children in the studied institutions.

Respondents unanimously highlighted the need for physical education specialists to conduct classes to address the issue of improving physical readiness. For resolving health-related issues, teachers use various forms of physical exercises, morning hygienic gymnastics, and physical education classes due to their professional preparation and qualifications. We, on the other hand, conduct national open games and various sports and recreational activities during long breaks and throughout the school day.

When asked which form of physical activity is preferred by the pedagogical team, responses were as follows: morning gymnastics (33.6%), national open games (38.4%), physical exercises included in the school curriculum (25.6%), and only (3.2%) referring to artistic gymnastics and water sports for children.

The most commonly used forms of physical education classes are: games (48.1%) and repetition of covered material (51.9%).

According to respondents, the most preferred and convenient forms of physical activity are: open games organized by the physical education teacher (22.6%), ball games (36.8%), and activities involving running elements (37.2%).

When asked to evaluate the existing physical education program for primary school children, 90.2% of teachers found it effective, 4.4% felt it did not align with the development of motor qualities, and 4.4% struggled to respond.

Evaluation of the Qualifications of Primary School Teachers in Conducting Sports and Health Promotion Activities:

The assessment of primary school teachers' qualifications in organizing sports and health activities revealed that 25.7% of teachers rated their proficiency as good, while 74.3% rated it as satisfactory.

Parents' Opinions on Physical Education in Schools:

Parents' opinions on improving physical culture among primary school students were also studied. The analysis of personal data indicated that 36.8% of respondents were parents aged up to 20 years, 33.8% were between 20-25 years, 18.6% were 26-30 years, and 10.8% were over 30 years old. Regarding educational background, 8.8% had incomplete secondary education, 26.6% had secondary education, 24.8% had secondary specialized education, and 39.8% had higher education.

When asked if their children frequently fall ill, 64.8% of parents reported that their children are rarely ill, 14.8% said occasionally, 5.6% said frequently, and 12.6% indicated their children are not ill at all.

Regarding the regularity of physical exercises, 30.2% of parents noted that physical education and health promotion classes are conducted occasionally, 35.2% said they are conducted sporadically, 10% reported no such classes, and 14.8% stated that their children do not participate at all.

*Pedagogical Experiment and Physical Performance Indicators:*

A pedagogical experiment was conducted over an academic year to examine changes in the physical abilities of primary school children. Test results were recorded at the end of each quarter, and these results were evaluated by an authorized commission.

For primary school boys in grades 1-2, the initial analysis of speed ability over a 30-meter distance showed an average time of  $6.6 \pm 0.6$  seconds. By the end of the second quarter, repeat tests indicated an unreliable improvement of 1.6%, with an average time of  $6.5 \pm 0.4$  seconds.

Coordination ability, measured by a 3 x 10 meter running test, revealed an average result of  $9.9 \pm 1.3$  seconds. After seven weeks, retesting showed an increase of 1.1% with an average time of  $9.8 \pm 1.4$  seconds.

*Expert Opinions:*

Leading specialists in physical education and children's sports, such as T.S. Usmonkhoyev and F.A. Karimov, emphasized the importance of speed-strength qualities and the significance of this movement test in improving children's physical abilities at a delicate age. Usmonkhoyev highlighted the need for specific attention to this factor, with standing long jump results showing an average of  $105.1 \pm 16.7$  cm, and a slight increase of 2.2% to an average of  $107.4 \pm 16.3$  cm.

In strength tests, primary results showed an average of  $11.7 \pm 2.3$  repetitions in pull-ups, with repeat tests indicating an improvement to  $12.3 \pm 2.2$  repetitions, a 4.9% increase. In the hand flexion and extension tests, initial results were  $6.9 \pm 1.9$  repetitions, with a significant increase of 2.9% upon retesting. For hand flexion and extension while lying, the initial results were also  $6.9 \pm 1.9$  repetitions, with tennis ball throwing tests showing an average result and a 4.1% reliable increase in performance (see Table 1).

During this quarter, the innovative methodology outlined in the author's program, which focuses on track and field and team sports, significantly enhanced speed indicators, resulting in a noticeable improvement in the average index of six movement qualities. Additionally, the strength qualities of the children improved by approximately 2.43%.

By the end of the third quarter, which was the longest period within the annual training cycle and included two mesocycles, there was a significant increase in the children's movement ability indicators. The most notable improvements were observed in strength assessments, with average values showing a variation between 11.4% and 17.9%. For example, the results in tennis ball throwing increased by 11.4%, indicating a strong correlation between strength exercises and throwing performance.

The pedagogical measures aimed at improving speed-strength qualities led to a slight positive shift of 2.7%, demonstrating a favorable trend.

In the third quarter, a substantial focus was placed on strength and power exercises for primary school children. Age-appropriate strength exercises, developed as part of the author's program, were implemented during physical education classes, catering to the developmental needs of the students.

**Table 1 Dynamics of Motor Performance Indicators of Primary School Students by Quarters in the Annual Educational Cycle**

№	Tests	FOURTH										
		I		II		%	III		%	IV		%
		$\bar{X}$	$\sigma$	$\bar{X}$	$\sigma$		$\bar{X}$	$\sigma$		$\bar{X}$	$\sigma$	
1	<b>30 ms run</b>	6,6	0,6	6,5	0,4	1,6	6,4	0,2	3,1	6,3	0,3	4,6
2	<b>Shuttle 3x10 m.s</b>	9,9	1,3	9,8	1,4	1,1	9,6	1,8	3,1	9,4	1,8	5,1
3	<b>Long jump s/m, cm.</b>	105,1	16,7	107,4	16,3	2,2	118,2	16,6	2,7	120,8	16,1	5,2
4	<b>Hanging pull-ups, times</b>	11,7	2,3	12,3	2,2	4,9	13,8	1,9	15,3	15,2	3,2	22,1

5	<b>Throwing a tennis ball, m.</b>	14,1	4,0	14,7	4,2	4,1	15,9	4,3	11,4	16,8	6,1	16,1
6	<b>One accent lie, times flexion and extension of arms</b>	6,9	1,9	7,1	1,6	2,9	8,4	1,4	17,9	8,5	1,9	18,9

## Conclusion

Analysis of the monitored data indicates a positive trend in the growth of strength capabilities assessed quarterly. By the end of the second quarter, results had improved by an average of 16.8% compared to the initial data. By the end of the third quarter, the average result for all test tasks was 53.5%, and it remained at this level by the end of the fourth quarter. In the fourth quarter, the motor physical preparedness of primary school-aged children reached 72.9%.

The pedagogical experiment conducted with 1st and 2nd-grade students revealed that the initial physical education activities did not fully meet the program requirements or achieve the social functions assigned to them. The mandatory physical education classes in the school system fail to sufficiently address the issue of hypodynamics. Unfortunately, it is nearly impossible to engage students in physical exercises outside of school or offer sports club sessions.

According to WHO standards, the amount of physical activity required by state standards is the minimum threshold necessary to avoid hindering the further development of students' functional readiness. Current state education standards require at least 4 academic hours of physical education classes per week for young students.

The study of 7-8-year-olds' readiness for physical activity identified delays in individual physical indicators for some children, reflecting deficiencies in the physical education system. Therefore, it is necessary to update the content of physical education for primary school students and make relevant adjustments within the existing technical capabilities of general education schools.

State standards for physical education require a methodologically skilled approach to organize physical activity, taking into account children's capabilities and optimizing the volume and intensity of physical activities. Modernization of physical education for primary school-aged children should focus on differentiating the pedagogical process content according to the physical development, activity levels, and functional capacities of this group of students.

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