



Analysis of the readiness of schoolchildren who participated in the regional stage of the All-Russian Olympiad in Physical Education

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Abstract

Objective of the study is to analyse the outcomes of the theoretical-methodological test at the regional stage of the All-Russian Olympiad of schoolchildren of the Tyumen Region for the period from 2021 to 2025.

Methods and structure of the study. In the period from 2021 to 2025, 1012 schoolchildren (9-11 grades) took part in the regional stage, of whom 48.7% (493) were female and 51.2% (519) were male.

Results and conclusions. The average score in the theoretical-methodological test during this period did not rise above 6.9 points among the girls and 6.7 among the boys out of 20 possible. It was noted that the participants most successfully cope with closed-type questions and matching tasks. And the greatest difficulty for the participants, as a rule, is caused by open-type questions, tasks requiring knowledge of terminology in the description of physical exercises, as well as problem-solving tasks. The preparation of schoolchildren for participation in the All-Russian Olympiad should be regular, clearly thought out, and include the consideration of such topics as: the cultural-historical foundations of physical culture and sports, the foundations of the theory and methodology of teaching motor actions, the development of physical qualities, the rules of competitions in various sports, the conceptual apparatus in the field of physical culture and sports.

Keywords: *physical culture and sports, preparedness, schoolchildren, Tyumen Region, All-Russian Physical Culture Olympiad.*

Introduction. Olympiads are an important instrument of the education system and a mechanism for finding and supporting talented youth [2, 5]. The regulations for holding the Olympiads provide the opportunity to participate for all schoolchildren, including those with special health conditions and disabilities. For the winners and prize-winners of the Olympiads, various forms of encouragement and support are provided, including the possibility of admission to higher educational institutions without examinations in the corresponding profile, as well as a monetary reward.

The Physical Culture Olympiad takes its beginning in the years 1999–2000 and has functioned regularly ever since. Despite the specificity of the discipline

“Physical Culture,” the content of the tasks takes into account the main message of the Olympiad movement – the formation of a stable interest in the academic discipline and the development of creative and research abilities in the field of physical culture and sports. With the general orientation of the Physical Culture Olympiad, there are also fundamental differences from other subjects. The Olympiad tests include two sections: practical and theoretical-methodological. The practical section presupposes tests in the sports that are part of the basic portion of the school sample program in physical culture in the sections: gymnastics, sports games (basketball, volleyball, football, floorball, handball), athletics, applied physical culture. A sport from the variable (regional)



part of the school program may also be included. The Central Subject-Methodological Commission recommends including from two to four tasks in the practical test of the Olympiad.

The theoretical-methodological test takes place in the form of testing and may include the most diverse range of question topics, from the cultural-historical foundations of physical culture and sports and the Olympic movement to the psychological-pedagogical characteristics of physical culture and sports activity and anti-doping rules. Thus, the participant of the Physical Culture Olympiad is presented not only with high requirements for physical and technical preparedness in various sports, but also with the need for a high level of erudition in the field of physical culture and sports. It is precisely low scores in the theoretical-methodological test that may prevent students from advancing to the final stage of the Olympiad. Therefore, the analysis of the performance of the theoretical-methodological test by schoolchildren at the regional stage of the All-Russian Olympiad and the identification of problem areas in their preparedness is relevant and will make it possible to determine further directions for building effective work with athletically gifted students.

Objective of the study is to analyse the outcomes of the theoretical-methodological test at the regional stage of the All-Russian Olympiad of schoolchildren of the Tyumen Region for the period from 2021 to 2025.

Methods and structure of the study. The study was conducted on the basis of the Institute of Physical Culture of Tyumen State University. The regional stage of the Olympiad is traditionally held on the basis of the sports facilities and the auditorium fund of the institute, with the involvement of the teachers of the Department of Technologies of Physical Culture and Sports Activity as a jury.

The article presents and analyzes the data of the theoretical-methodological test of the schoolchildren of the Tyumen Region participating in the regional stage of the All-Russian Olympiad for the period from 2021 to 2025.

Results of the study and discussion. Figure 1 presents the dynamics of the quantitative composition of the participants of the regional stage of the Tyumen Region. Thus, it can be noted that over the five years from the 2020 to the 2025 academic years, 1012 schoolchildren of grades 9–11 took part, of whom 48.7% (493) were female and 51.2% (519) were male.

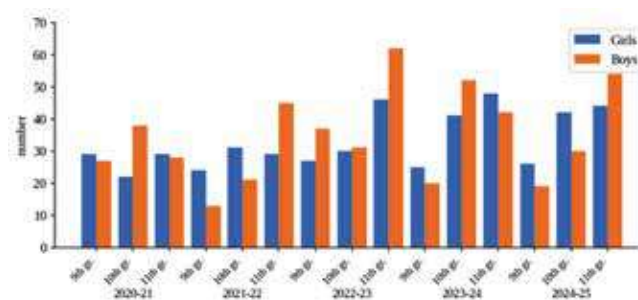
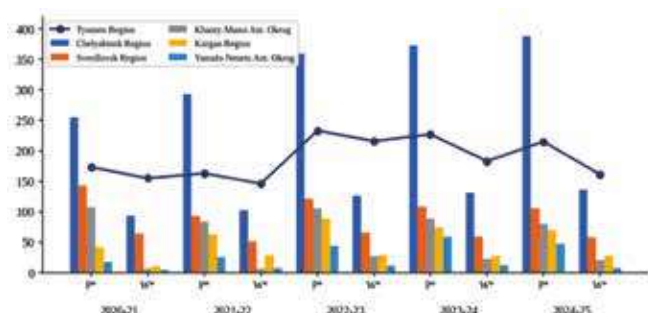


Figure 1. Quantitative composition of the participants of the regional stage in the Tyumen Region for the 2020–2025 academic years

The distribution of participants by grade varies. Thus, the largest number of grade-9 students was recorded in the 2022–23 academic year – 64 people, and the smallest – 37 students in the 2021–22 academic year. The largest number of grade-10 students was observed in the 2022–23 academic year – 93 people, the smallest in the 2021–22 academic year – 52 people. In the 2022–23 academic year, 108 people studying in grade 11 took part in the regional stage, which is 51 people more than in the 2020–21 academic year. Analysing the quantitative dynamics, we note that after the 2022 academic year the number of participants increased by 6.9%, and this trend continued further. Perhaps such changes are connected not only with the attractiveness of the academic subject “Physical Culture” among schoolchildren, but also with the solution of the tasks of attracting the population to regular physical culture activities, which are successfully solved in the Tyumen Region.

The increased interest of not only grade-11 students, but also of younger grades, is due to the introduction of additional privileges that make it possible, within 4 years, to enter a higher educational institution in the corresponding profile after becoming a winner/prize-winner of the final stage of the Olympiad.

The quantitative-qualitative indicators of the participation of schoolchildren by the constituent entities of the Ural Federal District are presented in Figure 2. Thus, of the six constituent entities of the Ural Federal District, the Tyumen Region, in terms of the number of participants, is ahead of such regions as the Sverdlovsk Region and the Khanty-Mansi Okrug and occupies second place, yielding only to the Chelyabinsk Region.



P* – participants; W* – winners and prize-winners.

Figure 2. Comparative dynamics of schoolchildren's participation in the regional stage of the All-Russian Olympiad in the Ural Federal District

It is important to note that the number of winners and prize-winners of the regional stage in the Tyumen Region is significantly larger in comparison with other constituent entities. Thus, for example, in the Chelyabinsk Region only 35% of the participants become winners and prize-winners of the regional stage, whereas in the Tyumen Region it is more than 70%. Despite this fact, the schoolchildren of the Tyumen Region lack the points to advance to the final stage. This testifies to the fact that, perhaps, the system of determining winners and prize-winners requires revision in the region.

The theoretical-methodological test at the regional stage takes place in the form of testing, for which the participant is allotted 45 minutes. The table 1 presents the types of tasks and their quantity for the period of the 2020–2025 academic years.

Thus, it can be noted that the number of tasks at the regional stage over the five years varied from 19 to 25 questions, combined by the type of task into 5–7 groups.

Every year, the largest number of questions in the test was offered in closed form, from 2 to 9 tasks – in open form, from 1 to 4 matching tasks. The last three academic years included one or two problems, less often – crosswords, rebuses, tasks with choosing the correct sequence. In the 2024–25 academic year, three tasks with illustrations in open form and two on describing physical exercises were presented.

The jury noted that the participants most successfully cope with closed-type questions and matching tasks. And the greatest difficulty for the participants, as a rule, is caused by open-type questions, tasks requiring knowledge of terminology in the description of physical exercises, as well as problem-solving tasks. For example, analyzing the results of the theoretical-methodological test in the 2024–25 academic year, it can be noted that in the eighth question, where it was necessary to insert the missing words into the saying of the ancient Greeks about an uncultured person: “Can neither (1), nor (2)!”, only three participants coped with the task. In the question where it was necessary to name the deviation from the model of technique when performing an exercise that has a noticeable negative impact on the result of the action, only 12.8% of the students coped. In the tenth question, only three ninth-graders and one eleventh-grader were able to indicate how an athlete's ability to maintain a given speed or pace of movements for a long time is designated.

Table 1. Types of tasks and their quantity at the regional stage for the period 2020–2025

Types of tasks	Academic year				
	2020-21	2021-22	2022-23	2023-24	2024-25
Closed-form task	9	6	10	10	7
Open-form task	4	9	4	6	7
Task with choosing the correct sequence	0	3	0	0	0
Matching task	4	3	2	1	2
Rebus task	1	0	0	0	0
Task on choosing correct positions	1	1	1	0	0
Crossword task	1	0	0	1	0
Problem-solving task	0	0	2	1	2
Task with illustrations in open form	0	0	0	0	3
Task involving enumeration	0	2	0	1	0
Task on describing physical exercises	0	1	0	0	2



More than 85% of the participants were unable to answer the question of how the actions of trainees after the teacher's command for adopting a particular formation are designated. More than 92% of the participants were unable to give the correct answer to the question of what a player or team occupying the last place in a championship is called. Almost 95% do not know what, in chess, a gross error by a player that leads to checkmate, material loss, or a worsening of the position is called. Only 25.3% of the participants correctly indicated that the movement of a column begins on the executive command "March!". It should be noted that grade-9 students coped better with the illustrated tasks than grade-10 and grade-11 students. Thus, the average group indicator of the correct performance of three tasks of this type was 40.2% among grade-9 students, whereas among grade-10 students it was only 27.8%, and in grade 11 – 35.3%. The tasks where the description of physical exercises was required caused difficulty for all the participants of the regional stage. Serious difficulties also arose in solving the problems. In the problem on calculating the results in shooting, all the ninth-graders, 98.6% of the tenth-graders, and 97% of the eleventh-graders were unable to perform the calculations correctly and give a complete answer to the question of the problem. In the second problem, only 14% of the participants were able to correctly distribute the teams in the tournament table of a basketball competition.

These results testify to the fact that, in preparing for the theoretical-methodological test, more attention should be paid to such topics as: the cultural-historical foundations of physical culture and sports, the foundations of the theory and methodology of teaching motor actions, the development of physical qualities. It is necessary to know the rules of competitions in various sports, to be able to describe a motor action terminologically correctly, etc.

Figure 3 presents the dynamics of the indicators of the theoretical-methodological preparedness of students for the 2020–2025 academic years. It should be noted that among grade-11 girls a decrease in the average score was observed. Thus, in the 2021 academic year the average score was 6.9 points, and in 2025 it decreased by 3.2 points. A negative dynamics is also observed among grade-11 boys. The highest average score was recorded in 2023 – 6.7, and in the last two years it was 4.3 points.

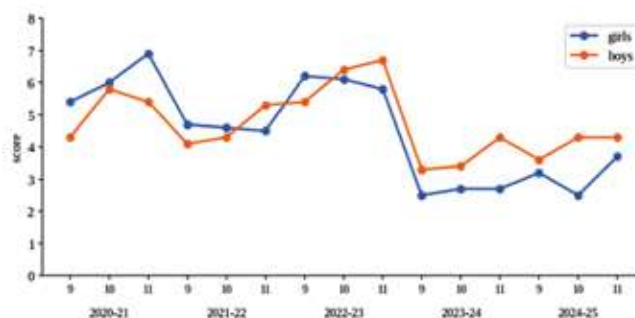


Figure 3. Dynamics of the theoretical-methodological preparedness of schoolchildren by average score

Comparing the results of the girls and the boys, it can be noted that in the 2020–21 academic year the girls coped better with the theoretical-methodological test. In the 2021–22 academic year, among the girls of grades 9 and 10, the average score was higher than among the boys. Among grade-11 students, the indicator of the boys is 0.8 points higher. In the 2022–23 academic year, the indicators of the girls and the boys were higher than in the previous years. Comparing the results by average score, it can be noted that grade-9 girls coped with the task better than grade-9 boys and grade-10 girls, and the average score of grade-11 boys is 0.9 points higher than that of the girls. The average score of the boys in the 2023–24 academic year is higher than that of the girls, but on the whole a sharp decrease in scores is observed for both. In the 2024–25 academic year, the indicators of the boys are slightly higher than those of the girls.

It should be noted that the maximum possible "credited" score that a participant can receive in the theoretical-methodological test is 20 points. Thus, the results of the students of the Tyumen Region testify to the insufficiently high theoretical-methodological preparedness of both boys and girls. In this connection, difficulties arise for selection to the next, final stage of the Olympiad.

Determining the level of theoretical-methodological preparedness of the schoolchildren, it can be noted that since the 2022–23 academic year a sharp decrease in it has been observed. Thus, 215 participants coped with less than 50% of the tasks. And in the 2024–25 academic year there are no schoolchildren who were able to cope with more than 50% of the tasks. Unfortunately, such results do not allow the participants to score the necessary number of points to advance to the All-Russian stage.



Conclusions. Thus, these indicators testify to the insufficient level of theoretical knowledge and methodological skills in the field of physical culture and sports among schoolchildren. We believe that the preparation of schoolchildren for participation in the All-Russian Olympiad should be regular, clearly thought out, and include a wide range of topics. To improve the current situation, school physical culture teachers should perhaps carry out the early selection of schoolchildren who show interest and abilities in physical culture and sports activity. In lessons, attention should be paid not only to the performance of practical tasks by schoolchildren, but also to acquainting them with the theoretical aspects of physical culture and sports activity. University teachers should offer professional development courses for teachers aimed at working with talented and athletically gifted schoolchildren. The training camps regularly held before the regional stage should be of a more long-term nature, with the possibility of considering relevant topics and including diverse forms of teaching: group, game-based, interactive, etc. For more interested schoolchildren, cooperation with senior students of the institute of physical culture as mentors should be offered.

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