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METHODOLOGY FOR ORGANIZING ATHLETICS CLASSES USING MODERN INNOVATIVE EDUCATIONAL TECHNOLOGIES

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ABSTRACT

This article examines the organizational and methodological aspects of integrating innovative educational technologies into the teaching of track and field athletics in general secondary schools. The relevance of the study is determined by the need to improve the quality of school physical education, increase adolescents' physical activity levels, and individualize the process of acquiring track and field skills. The aim of the study is to develop and provide a scientific rationale for a methodology for organizing track and field lessons through the integrated use of digital learning tools, visual feedback, differentiated motor tasks, and interactive forms of pedagogical interaction. The study involved 31 seventh-grade students from General Secondary School No. 5 in the Altynsay District of the Surkhandarya Region, Republic of Uzbekistan..

Introduction. The contemporary development of general education is characterized by expanding opportunities for integrating innovative pedagogical technologies aimed at improving the quality of education and promoting individualized approaches to teaching and learning [2, 3, 7]. These developments are particularly significant in physical education, where the effectiveness of pedagogical practices is determined not only by students' levels of physical fitness but also by the quality of motor skill acquisition, the sustainability of learning motivation, and the development of skills necessary for independent participation in physical activity [1, 4].

Track and field athletics plays an essential role in school physical education due to the accessibility of its exercises, the diversity of movement patterns, and its potential to promote the comprehensive development of physical abilities. Running, jumping, and throwing activities contribute to the acquisition of fundamental motor skills, the development of speed, strength, and coordination, as well as improvements in overall physical performance. However, effective learning of track and field techniques largely depends on an appropriate balance between physical workload and task difficulty, timely correction of movement errors, and systematic pedagogical assessment and monitoring [5, 6, 9].

According to the World Health Organization (WHO) guidelines, children and adolescents aged 5-17 years should engage in an average of at least 60 minutes of moderate-to-vigorous physical activity per day across the week. Within this framework, school-based physical education is recognized as an important component in promoting the development of sustainable physically active lifestyles [8, 10, 12].

One of the promising approaches to improving school physical education is the integration of digital educational tools with traditional methods of motor skill instruction. The use of video demonstrations, slow-motion playback of movements, electronic assessment tools, and interactive learning activities offers additional opportunities to explain technical elements, facilitate motor skill acquisition, and provide individualized feedback to students [11, 13, 15].

In his systematic review, D. Yu. Turdimuratov examines the application of video-based visual feedback as a means of enhancing motor learning in physical education classes. The author highlights the pedagogical potential of video technologies while emphasizing the importance of considering the specific characteristics of learning tasks and the organization of feedback mechanisms [7, 14].

These studies, based on a systematic analysis of scientific publications, emphasize the essential role of pedagogical feedback in motor skill acquisition. However, the effectiveness of different feedback strategies may vary depending on the nature of the exercise, students' initial levels of physical preparedness, and the characteristics of the instructional approach employed [3, 11].

In a systematic review, the researcher identified the potential of digital educational tools to enhance students' physical activity levels, learning motivation, and motor skill acquisition. Nevertheless, the reviewed literature reveals considerable heterogeneity in research findings, highlighting the need for further experimental investigations to establish the effectiveness of digital technologies in physical education.

The pedagogical value of innovative educational tools lies not merely in the introduction of electronic devices but rather in their purposeful and systematic integration into the teaching and learning process. Such integration should promote instructional clarity, accessibility,

individualized learning experiences, and timely correction of movement errors, thereby creating favorable conditions for the effective acquisition and refinement of motor skills.

Materials and Methods. The study was conducted from March 1 to April 4, 2026, at General Secondary School No. 5 in the Altynsay District of the Surkhandarya Region, Republic of Uzbekistan.

A total of 31 seventh-grade students participated in the study. This age group was selected based on the specific characteristics of adolescents' physical development, the active acquisition and refinement of motor skills, and their ability to perform learning tasks involving varying levels of coordinative complexity.

The methodological framework was developed through the integration of four interrelated components: digital support for the teaching and learning process, differentiation of physical workloads, interactive learning activities, and objective pedagogical assessment and monitoring.

The first component - digital visualization of motor techniques. This component involves the use of short instructional videos demonstrating the correct execution of track and field exercises.

The second component - differentiated organization of motor activities. The content of exercises and the parameters of physical workload are adapted to students' individual physical capabilities, levels of motor proficiency, and learning needs.

The third component - interactive educational technologies. The proposed methodology incorporates pair-based and group activities, station-based motor learning tasks, elements of competitive activities, and peer assessment of movement techniques according to predefined evaluation criteria.

The fourth component - ongoing pedagogical assessment and monitoring. This component integrates quantitative results from motor performance tests with qualitative assessments of exercise execution techniques. The use of electronic data recording and monitoring tools enables the systematic documentation of students' individual achievements and the evaluation of changes in their physical fitness and motor performance over time.

Results. The principal methodological outcome of the study is the development of a structured approach to organizing track and field lessons that systematically integrates practical motor activities, digital educational resources, and individualized pedagogical feedback.

The proposed methodology is based on the principle that innovative educational technologies should serve as complementary instructional tools, enhancing the clarity and precision of explanations, improving the quality of pedagogical assessment and monitoring, and increasing the accessibility of learning materials without reducing the time allocated to active physical engagement.

The proposed instructional framework is designed to promote three interrelated dimensions of student development: physical abilities, technical proficiency in track and field activities, and cognitive engagement in the learning process.

Table 1. Structure of the Methodology for Organizing Track and Field Lessons Using Innovative Educational Technologies

Stage and Content	Innovative Tools and Methods	Assessment Indicators	Expected Pedagogical Outcomes
Diagnostic and Preparatory Stage: Introduction to running and jumping techniques and assessment of initial physical fitness levels	Video demonstrations, digital recording of performance results, individualized learning tasks	30 m sprint, 3 × 10 m shuttle run, standing long jump	Identification of individual characteristics and development of initial understanding of movement techniques
Instructional Stage: Acquisition of fundamental techniques in track and field exercises	Slow-motion video analysis, visual feedback, differentiated physical exercises	Correctness of starting positions, movement coordination, accuracy of technical execution	Improvement of motor coordination and acquisition of efficient movement techniques
Developmental Stage: Consolidation of motor skills and improvement of physical fitness	Interactive learning stations, group activities, gamification elements, individualized performance monitoring	Speed, speed-strength, and coordination abilities	Improvement in exercise performance and enhancement of student engagement
Assessment and Consolidation Stage: Reassessment of motor performance and analysis of individual achievements	Electronic recording of performance indicators, comparative video analysis, self-assessment	Changes in motor test results, technical proficiency, achievement of learning objectives	Evaluation of individual progress and identification of areas for further improvement

Note: The table presents the structure of the developed methodology and the proposed assessment indicators rather than the quantitative results obtained from the conducted experiment.

An analysis of the proposed methodological framework reveals several key characteristics of its pedagogical organization.

First, the integration of digital educational materials shifts the instructional emphasis from predominantly verbal explanations toward visually supported motor skill acquisition. This approach is particularly important when teaching complex technical elements that require precise coordination and synchronization of movements across different body segments.

Furthermore, the implementation of individualized learning tasks provides a methodological basis for adjusting exercise complexity and preventing situations in which standardized performance requirements fail to account for differences in students' physical abilities, motor proficiency, and individual learning needs.

The presented findings represent the principal scientific and methodological outcomes of the study, including the structural organization of the proposed pedagogical approach, the content of its constituent components, and the assessment instruments designed to evaluate students' motor performance. However, a quantitative evaluation of the methodology's effectiveness requires the analysis of actual experimental data obtained through systematically recorded measurements and assessments.

Discussion. The proposed methodology reflects the current trend toward integrating digital educational tools into school-based physical education. Its distinctive feature lies in the comprehensive combination of visual instruction, individualized motor learning tasks, interactive learning activities, and systematic pedagogical monitoring. From a theoretical perspective, this integrated approach is consistent with established principles emphasizing the importance of feedback in motor skill acquisition and development. In the context of track and field instruction, the ability to repeatedly review specific technical elements is particularly valuable. Unlike a single live demonstration, digital video recordings enable students to examine complex phases of movement multiple times, identify technical errors, and conduct comparative analyses of movement execution.

For seventh-grade students, maintaining an optimal balance between instructional explanations, digital demonstrations, and active participation in physical exercises is particularly important. Excessive time devoted to watching instructional videos may reduce the proportion of lesson time spent in active movement, potentially undermining the health-promoting objectives of school physical education.

Therefore, digital educational tools should be used selectively and for relatively short periods, preferably immediately before or after performing a motor task, particularly when timely feedback and correction of technical errors are required. This approach helps preserve students' active engagement in physical exercise while maximizing the instructional benefits of digital technologies.

Conclusion. The conducted scientific and methodological study provides a basis for drawing the following conclusions.

1. Improving the organization of track and field lessons in general secondary schools requires the comprehensive integration of traditional physical education methods with innovative educational technologies. Such an approach promotes instructional clarity, facilitates the individualization of motor learning tasks, and ensures systematic pedagogical feedback throughout the teaching and learning process.

2. The developed methodology comprises four interrelated components: digital visualization of exercise techniques, differentiated organization of motor activities, interactive learning approaches, and ongoing pedagogical assessment and monitoring. Their functional integration establishes a coherent organizational and methodological framework for teaching track and field skills to seventh-grade students.

3. To evaluate the effectiveness of the proposed methodology, a comprehensive system of assessment indicators has been developed, including performance in the 30 m sprint, the 3 × 10 m shuttle run, and the standing long jump, together with a qualitative assessment of technical proficiency in performing track and field exercises.

4. The practical significance of the proposed methodology lies in its applicability to general secondary school settings through the use of accessible digital teaching and assessment tools. Importantly, digital technologies should complement rather than replace practical motor activities, ensuring that the duration and intensity of students' physical engagement are maintained while enhancing the overall quality of instruction.

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