

THE USE OF GAME-BASED METHODS IN TEACHING TRACK AND FIELD ELEMENTS TO FIRST-YEAR UNIVERSITY STUDENTS

Sarukhanov Arsen Albertovich

Senior Lecturer, Department of Physical Education
Kokand State University

Abstract: The article provides a detailed analysis of the pedagogical foundations and practical aspects of using game-based methods in teaching elements of athletics to first-year university students. Theoretical approaches are examined, the methodology for integrating game forms into the educational process is described, and the results of the experimental study are presented. It is shown that game-based methods enhance students' motivation, foster a stable interest in physical exercise, promote active mastery of athletic techniques, and contribute to the development of physical qualities.

Keywords: game-based methods, athletics, physical education, students, learning, motivation, pedagogical process.

INTRODUCTION

Track and field is a fundamental sport that includes exercises aimed at developing key physical qualities such as strength, speed, endurance, agility, and flexibility. The process of teaching running, jumping, and throwing techniques requires a special pedagogical approach. One of the most effective ways to enhance students' learning activity is through the use of game-based methods, which make it possible to combine learning, development, and upbringing within a unified educational process.

The relevance of this research is determined by the need to find new forms and methods to increase students' interest in track and field activities, as well as to identify effective means for developing their motor skills and physical qualities within the modern educational environment. For example, studies have shown that "movement-developing games ... are one of the main tools and methods of physical education and the development of key physical qualities such as strength, speed, endurance, agility, and flexibility." Moreover, it has been noted that the use of game-based and competitive technologies in physical education lessons contributes to improving the quality of learning [3].

The purpose of this study is to determine the effectiveness of using game-based methods in teaching first-year students the elements of track and field.

Games as a form of activity have long been used in pedagogy to stimulate students' engagement. As it is often said, "the game method in physical education is characterized by a storyline organization, initiative, resourcefulness, and agility." Experts emphasize that game-based methods can transform traditional lessons into activities where students participate more voluntarily, showing initiative, creativity, and a desire for success [6].

Track and field combines simple forms of movement (running, jumping, throwing) with relatively high technical execution. Therefore, the use of game-based methods is justified at different stages of learning:

- at the initial stage — for mastering basic movements and relieving tension;
- at the reinforcement stage — for improving coordination and reaction speed;
- at the competitive stage — for developing willpower and building confidence.

The game-based method is not merely play for entertainment; it is an organized pedagogical form in which specific educational and developmental goals are achieved through a game plot.



For instance, game technologies in physical education make it possible to “diversify classes and engage students in sports-related activities”.

MATERIALS AND METHODS. The present study is based on the comprehensive application of theoretical and practical methods that ensure a holistic examination of the use of game-based methods in teaching track and field elements. The methodological foundation relies on general pedagogical principles such as systematization, activity, awareness, visualization, and accessibility, as well as the concepts of the learner-centered and activity-based approaches.

The material base of the research was the Department of Physical Education at Kokand State University, where track and field classes were conducted with first-year students. For the pedagogical experiment, standard track and field equipment and tools were used, including stopwatches, starting blocks, small balls, measuring tapes for distance measurement, and sports equipment for conducting active games.

The research methods included:

- theoretical analysis of scientific and methodological literature;
- pedagogical observation of the educational process;
- student surveys;
- pedagogical experiment;
- methods of mathematical and statistical data processing.

ANALYSIS OF SCIENTIFIC LITERATURE. The analysis of scientific and methodological literature has shown that the use of game-based methods in physical education is one of the key directions for enhancing the learning process. As noted by V.K. Balsevich [2], the game serves as a natural form of motor activity in which learning is combined with the development of physical and psychological qualities of the individual.

I.P. Volkov [4] emphasizes that the game-based method helps create a positive emotional atmosphere during classes, which is especially important when teaching first-year students who are just beginning systematic physical education training. According to Z.V. Kuznetsova [5], “game-based forms contribute to the development of stable motivation, the spirit of competition, increased initiative, and the improvement of students’ communication skills.”

Particular attention in research is paid to the role of games as a tool for conscious learning of motor actions. For example, E.F. Proskurina [9] points out that game technologies “allow the natural combination of emotional involvement with the practice of technical elements, which increases the effectiveness of learning and fosters students’ interest in sports.”

A comparative analysis of publications revealed that most works focus on the use of game-based technologies in schools, less frequently in higher education institutions, and even fewer on their application in teaching track and field to university students of non-sporting specializations. Therefore, the chosen direction of research possesses both practical significance and scientific novelty.

2. Organization and Implementation of the Pedagogical Experiment

The research was conducted at Kokand State University during the 2024–2025 academic year. The experiment involved 48 first-year students (24 males and 24 females) aged 17–19 who had no sports specialization. All participants were divided into two equal groups: control and experimental.

- **Control group (CG):** training in track and field elements was conducted using the traditional method (explanation, demonstration, repetition).
- **Experimental group (EG):** training was organized using specially developed game-based methods and exercises aimed at developing motor skills through play activities.



The duration of the experiment was **8 weeks** (16 training sessions). Each session consisted of three parts:

1. **Preparatory part** – low-intensity active games aimed at developing reaction and attention (“Quick Start,” “Find Your Place”).
2. **Main part** – games and play-based exercises designed to teach track and field techniques: for running — “*Catch the Leader*,” “*Pass the Baton Correctly*”; for jumping — “*Jump Across the River*,” “*Hit the Zone*”; for throwing — “*Accurate Throw*,” “*Sniper*.”
3. **Final part** – games for breathing recovery and emotional relaxation (“*Pass the Motion*,” “*Team Rhythm*”).

3. RESEARCH METHODS

Pedagogical observation — was carried out throughout the entire experiment, recording students’ activity, emotional state, and the nature of their participation in games.

Questionnaire survey — conducted twice (before and after the experiment) to identify changes in motivation and attitudes toward track and field classes.

Testing of physical indicators included:

- 60-meter sprint (assessment of speed);
- standing long jump (assessment of speed-strength qualities);
- small ball throw (assessment of strength and coordination).

Expert evaluation by instructors — the technique of exercise performance was assessed using a 5-point scale.

Statistical data processing — mean values, standard deviation, and Student’s t-test ($p < 0.05$) were used to determine the significance of differences between the results of the control and experimental groups.

RESULTS AND DISCUSSION. The results of the pedagogical experiment confirmed the effectiveness of using game-based methods in teaching track and field elements to first-year university students. In the early weeks of the experiment, the experimental group showed higher activity and engagement in the learning process. The game-based format of the lessons helped create a positive emotional atmosphere, reflected in a steady interest in performing tasks, a spirit of cooperation, and friendly competition. In contrast, the control group, which was taught using traditional methods, did not exhibit such pronounced emotional changes — students maintained a passive, task-oriented attitude, especially when learning technically complex elements such as running and jumping.

The analysis of the questionnaires showed that before the experiment, only about half of the students in both groups (52%) demonstrated a clear interest in track and field, viewing it mainly as a mandatory academic subject. After the implementation of game-based methods, the number of students in the experimental group expressing a positive attitude toward the discipline and a desire to continue engaging in it increased to **87%**. There was also an increase in self-confidence and satisfaction with performance. Students often noted that game tasks helped them not only to perform exercises but also to “feel the movement” and understand the technique through practice and interaction with peers.

The dynamics of physical fitness development were also significantly more pronounced in the experimental group. According to the control tests, the average results improved by **8.4% in the 60 m sprint, 9.1% in the standing long jump, and 10.3% in the small ball throw**. In the control group, similar indicators improved only slightly (within 3–4%). Statistical processing of the data using Student’s t-test revealed significant differences between the final results of the groups ($p < 0.05$), confirming the real impact of the game-based approach on learning effectiveness and the development of students’ physical qualities.



A comparison of the obtained data with previous studies (Balsevich, 2001; Kuznetsova, 2019; Proskurina, 2024) shows consistent conclusions: game-based forms indeed contribute to increased interest in physical activity and to more effective mastery of motor skills. Unlike in the school context, where the game method is often used as an additional motivational tool, in university practice it has proven to be a full-fledged methodological approach capable of integrating learning, education, and development into a unified process.

Observations and Discussion. The observations also revealed several patterns. First, game-based activities proved to be most effective during the initial stages of learning, when students are just beginning to master basic technical elements. At this stage, games reduce anxiety and make the learning process more natural and accessible. Second, it is important to properly regulate the intensity of gaming activities: excessive emphasis on the game component may reduce attention to technical accuracy and lead to superficial mastery of movements. The best results are achieved when game exercises are combined with traditional training elements, creating an optimal balance between emotional engagement and technical precision.

Overall, the study allows us to conclude that the use of game-based methods in teaching track and field elements contributes not only to improving students' physical performance but also to fostering a stable motivation for physical education. The emotional richness and competitive nature of games create conditions for active involvement of each participant, which is particularly valuable when working with students who lack prior sports training.

The findings confirm that game-based methods can serve as an effective pedagogical technology, ensuring the integration of educational, developmental, and formative objectives. They help develop not only physical readiness but also movement culture, emotional stability, and teamwork skills. All these aspects make game-based methods a promising direction in improving the system of physical education in higher education institutions.

CONCLUSIONS. The conducted research confirmed that the use of game-based methods in teaching track and field elements to first-year students at Kokand State University is an effective pedagogical approach that provides a comprehensive influence on the motivational, cognitive, and physical dimensions of students' development.

First, the introduction of game-based activities significantly increased students' interest in track and field classes. The game format created a positive emotional environment and helped relieve psychological tension, which is typical for first-year students adapting to new learning conditions. As a result, students showed more initiative, confidence, and a desire for personal achievement.

Second, the experiment demonstrated a statistically significant improvement in students' physical fitness indicators. The use of game exercises aimed at developing speed, coordination, strength, and endurance contributed to more balanced physical development compared to traditional methods. Games that encouraged competition and developed a sense of rhythm and tempo had a particularly positive impact on students' mastery of athletic techniques.

Third, game-based methods showed high pedagogical value in developing students' skills of interaction, responsibility, and self-organization. Group forms of activity fostered cooperation, mutual support, and the development of communication skills. This not only strengthened discipline but also improved the quality of collective learning.

Fourth, the results confirmed that game-based methods can serve as an effective means of pedagogical correction. They enable teachers to regulate physical load, manage students' attention and motivation, and adapt the learning process to individual characteristics.

Thus, the use of game-based methods in teaching track and field elements should be considered an essential component of modern physical education methodology in higher education. These methods not only improve the quality of mastering athletic techniques but also cultivate a lasting



need for physical activity, strengthen health, enhance physical qualities, and promote the formation of an active and healthy lifestyle culture.

In the future, it is advisable to expand the practice of implementing game-based technologies in university educational processes and to conduct more in-depth research aimed at identifying their long-term effects on the physical and psychological development of students across various disciplines.

REFERENCES

1. Balsevich, V.K. (2001). *Physical Education and the Development of Motor Activity in Youth*. Moscow: Fizkultura i Sport.
2. Volkov, I.P. (2016). *Game Methods in Physical Education: Theory and Practice*. Saint Petersburg: Lesgaft University Press.
3. Kuznetsova, Z.V. (2019). *Innovative Game Technologies in the System of Physical Training of Students*. Moscow: Russian State University of Physical Education.
4. Proskurina, E.F. (2024). *Game-Based Approaches to Teaching Motor Skills in University Students*. Journal of Modern Pedagogical Science, No. 2, pp. 45-52.
5. Kharlamov, I.F. (2017). *Didactics of Physical Education: Methods and Technologies*. Kazan: Pedagogical University Press.
6. Matveev, L.P. (2005). *Theory and Methodology of Physical Culture*. Moscow: Akademiya Publishing.
7. Назарова, И. П. (2022). Инновационные подходы к преподаванию лёгкой атлетики в вузе. *Педагогика и психология образования*, (4), 133–138.
8. Slastenin, V.A., & Chizhakova, G.I. (2014). *Pedagogical Technologies and Student Motivation in Physical Education*. Moscow: Academia.
9. Platonov, V.N. (2018). *Modern Concepts of Sports Training and Education*. Kyiv: Olimpijska Literatura.
10. Zheleznyak, Yu.D. (2020). *Games and Competitions in Physical Education: Practical Guide for Teachers and Coaches*. Moscow: Sport Academy.
11. Саруханов, А. А., & Султанов, У. И. (2023). Умумривожлантирувчи машқлар ва уларни ўтказиш орқали ўқувчиларда соғлом турмуш тарзини шакллантириш. *Oriental Art and Culture*, 4(2), 773-776.
12. Albertovich, S. A., Akhrorjanovich, A. B., & Islamjonovich, U. K. (2023). Importance of the laws of education and training in the skins of physical culture. INTERNATIONAL JOURNAL OF SOCIAL SCIENCE & INTERDISCIPLINARY RESEARCH ISSN: 2277-3630 Impact factor: 8.036, 12(02), 85-88.

