TRANSFORMING TRADITIONAL PHYSICAL EDUCATION METHODS THROUGH THE INTEGRATION OF DIGITAL TECHNOLOGIES

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ABSTRACT

This article examines current trends in the development of physical education in the context of digitalization of education. It highlights the limitations of traditional methods and the advantages of integrating digital technologies, including monitoring physical performance, individualizing training, and using interactive platforms and game elements. The need for digital solutions to improve the effectiveness, motivation, and accessibility of physical education is substantiated.

In recent decades, physical education has undergone significant changes due to the development of digital technologies. While the emphasis previously was solely on traditional forms of instruction—training, competitions, and practical exercises—today, the educational process in this field is being enriched by digital tools, opening up new horizons for learning, motivation, and performance monitoring.

Traditional physical education methods relied on direct interaction between teachers and students. The focus was on demonstrating exercises, practicing motor skills, meeting standards, and developing physical qualities. This approach was effective, but had several limitations:

- insufficient consideration of the individual characteristics of students;
- limited ability to monitor progress;
- dependence on the subjective assessment of the teacher;
- weak motivational component, especially among students who are not sports-oriented.

These factors encourage us to look for new tools that will make our classes more effective and interesting.

The role of digital technologies

Modern digital technologies are bringing about qualitative changes in the physical education system:

1. **Data monitoring and analysis.** Wearable devices (fitness trackers , smartwatches, heart rate monitors) allow you to track your body's vital signs, such as heart rate, activity level, step count, and sleep quality. This allows you to objectively assess your physical condition and progress.
2. **Individualized training.** Based on the collected data, the instructor can tailor training programs to the individual student's level of fitness, age, health, and goals.

3. **Interactive platforms.** Online applications and educational services help students learn physical education theory, track class schedules, and complete individual assignments.

4. **Gamification of the process. The use of** gamification elements (points, rankings, challenges) increases interest and motivation, especially among young people.

5. **Remote and hybrid formats.** During the pandemic, it became clear that physical education could be partially conducted online: students complete exercises using video tutorials , record their progress in apps, and the teacher monitors their progress.

Benefits of technology integration

1. **Objectivity of assessment.** Traditional assessment methods often relied on subjective observations by the teacher, which could lead to biased results. Digital devices (fitness bracelets , heart rate monitors, mobile apps) allow for accurate and reliable recording of metrics such as heart rate, physical activity level, step count, and calorie burn. This ensures objective assessment, transparency of results, and fosters a sense of fairness in students.

2. **Increased motivation.** Interactive technologies and gamification elements enhance student engagement. Point systems, rankings, online challenges , and virtual competitions encourage students to be more active and competitive. Furthermore, visualizing progress in apps (graphs, achievements, notifications) fosters intrinsic motivation and fosters a habit of consistent physical activity.

3. **Accessibility.** Digital resources make physical education accessible anytime, anywhere. Online platforms, mobile apps, and video training ensure continuity of the educational process, including for students learning remotely or who have missed classes for other reasons. This expands opportunities for individual work and self-study.

4. **Developing digital literacy.** The use of digital tools in physical education helps students develop modern competencies: the ability to use physical activity analysis apps, utilize online workout planning services, and keep digital health diaries. These skills are important not only for personal development but also for future professional development in the context of society's digital transformation.

The integration of digital technologies into physical education doesn't replace traditional methods, but rather complements and transforms them, creating conditions for a more flexible and modern educational process. The use of digital tools optimizes knowledge and skill assessment, increases student motivation, expands opportunities for individualized learning, and makes classes accessible in any format—in-person, remote, or blended.

Digitalization is particularly important in developing students' strong self-monitoring and self-regulation skills . Constantly monitoring physiological indicators using gadgets develops students' understanding of the relationship between physical activity, health, and lifestyle. This not only improves their physical fitness but also fosters a responsible attitude toward their own health, which is especially important in today's increasingly fast-paced world, with increasing stress and widespread physical inactivity.

The introduction of digital technologies also helps students develop new competencies: the ability to use digital platforms, analyze activity data, and apply it to training planning. These skills extend beyond physical education and become a significant part of the overall digital literacy required for future professionals in various fields.

Thus, the synthesis of traditional methods and modern digital solutions opens new horizons in the development of the physical education system. The prospects for further digitalization lie not only in improving the quality of education but also in creating the conditions for shaping a healthy, socially active, and competitive generation prepared for the challenges of the 21st century..

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