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TECHNOLOGIES FOR DEVELOPING PROFESSIONALLY-ORIENTED MOTOR PREPAREDNESS IN TECHNICAL HIGHER EDUCATION INSTITUTIONS

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Abstract

This thesis is devoted to technologies for developing students' motor preparedness in the process of preparing them for professional activities at technical higher education institutions. It analyzes the concept of professionally-oriented motor preparedness, its role in the system of physical training, and the modern pedagogical and digital technologies applied in the educational process. Furthermore, the thesis highlights opportunities to enhance students' physical preparedness according to professional activity requirements through interactive exercises, simulation trainings, and digital monitoring systems.

Keywords

professional activity, motor preparedness, modern technologies, technical higher education institutions, physical training, digital learning, simulation exercises.

In modern society, one of the primary tasks of technical higher education institutions is to train competitive, highly qualified, and functionally prepared specialists for the labor market. Today, the increasing complexity of technological processes, the acceleration of production environments, and the growing physical and psycho-emotional workloads in professional activities require a comprehensive approach to student preparation. Therefore, students' professional training should not be limited solely to theoretical knowledge and technical skills but must also include the development of their motor preparedness and physical capabilities.

Motor preparedness is understood as an individual's ability to perform various movements effectively, encompassing physical qualities and functional capacities. Professionally-oriented motor preparedness is a systematic process that ensures adaptation to movements, work conditions, and physical workloads specific to a particular profession or type of labor activity. In technical higher education institutions, this training focuses on developing physical qualities necessary for engineering, energy, information technology, construction, and industrial disciplines.

Scientific studies show that insufficient physical preparation for professional activity can lead to rapid fatigue, decreased attention, reduced work efficiency, and health problems among students. In particular, technical students often demonstrate a sedentary lifestyle, prolonged sitting, poor ergonomic conditions, and insufficient physical activity. These circumstances further emphasize the need to develop motor preparedness closely linked to professional activity.

Traditional physical education classes are often aimed at general physical development and do not fully account for professional activity requirements. Therefore, the development of professionally-oriented motor preparedness using modern technologies is an important pedagogical approach. In this approach, profession-specific movements, physical workloads in production processes, work conditions, and safety factors are integrated into the content of training sessions.

Nowadays, digital and innovative technologies are widely used in the process of developing motor preparedness. For example, simulation trainings allow students to perform exercises that closely replicate real production conditions, model professional movements in a virtual environment, and visualize the training process. Such technologies provide students with a safe, effective, and motivating learning environment.

Digital monitoring systems continuously track students' physical condition, cardiovascular activity, workload levels, and training effectiveness. This allows for individualized training, prevents overexertion, and contributes to health protection. Additionally, mobile applications and online platforms enable students to independently plan and monitor their physical exercises.

The development of professionally-oriented motor preparedness also plays an important role in fostering a culture of healthy lifestyle. Students learn to integrate physical activity into daily life, develop a conscious attitude toward health, and acquire skills to manage their physical condition throughout professional activities.

The professional competence of instructors and coaches is one of the key factors determining the effectiveness of this process. Proper implementation of modern technologies in physical education, development of profession-specific exercise complexes, and consideration of students' individual characteristics require high methodological preparedness from educators.

Conclusion. The results of the study indicate that developing professionally-oriented motor preparedness in technical higher education institutions is an essential component of modern educational systems. Students' future professional activities are directly related to technological processes, which require high physical endurance, movement accuracy, and functional stability. Therefore, aligning physical education classes with professional activity requirements is of great importance.

Training organized using innovative and digital technologies increases students' motor preparedness, allows individualized workload management, and ensures effective training outcomes. Simulation trainings, interactive exercises, and digital monitoring systems provide continuous oversight of students' physical condition and work capacity. This contributes to health promotion and enhances resistance to fatigue.

In summary, the systematic implementation of professionally-oriented motor preparedness technologies in technical higher education institutions helps to train healthy, functionally prepared, and competitive specialists. This approach has significant scientific and practical value for improving educational quality and promoting a culture of healthy lifestyles.

References:

1. Bailey, R., Hillman, C., Arent, S., & Petitpas, A. (2013). Physical Activity: An Underestimated Investment in Human Capital?. Journal of Physical Activity and Health, 10(3), 289–308.
2. Равшанов Б. Х. Подготовка будущих специалистов к профессии с помощью информационно-коммуникационных технологий //Научно-исследовательский журнал “Педагогическое образование. – Т. 2.
3. Chen, S., & Liu, X. (2020). Application of Digital Technologies in Physical Education. Education and Information Technologies, 25(4), 3051–3066.
4. Равшанов Б. Х. Обучение применению принципов здорового образа жизни в профессиональной деятельности с помощью цифровых средств //innovative achievements in science 2024. – 2025. – т. 4. – №. 40. – с. 125-128.
5. Khasanovich R. B. The importance of digital technologies in enhancing the professional competence of future physical education and sports specialists in vocational education institutions //sustainability of education, socio-economic science theory. – 2025. – Т. 3. – №. 30. – С. 119-121.
6. Fatullayev, A. N. (2025). Professionally-Oriented Motor Preparedness in Technical Universities. Bukhara State Technical University Press.