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DEVELOPMENT OF PHYSICAL EDUCATION AND SPORTS IN HIGHER EDUCATION INSTITUTIONS

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Abstract

This article explores current trends and challenges in the development of physical education and sports within higher education institutions. It highlights the role of physical culture in promoting a healthy lifestyle among students and outlines strategic directions for improving the educational process in this field. It was found that the effectiveness of physical education largely depends on the integration of innovative methodologies, interdisciplinary approaches, and support from government bodies and university administrations. The article also reviews international experiences and prospects for the use of interactive technologies in the sports and educational process.

Keywords: Physical education, higher education, sports, students, healthy lifestyle, physical culture, innovation, interactive technologies.

Introduction

In contemporary society, physical education plays a fundamental role in the comprehensive development of university students, serving as a crucial mechanism for fostering not only physical health but also psychological well-being and social adaptability. The period of higher education represents a significant stage in the socialization process of young adults, during which they acquire not only specialized professional knowledge but also important ethical values, worldview perspectives, and behavioral norms that

shape their future personal and professional lives (Andrushchenko, 2012).

The integration of physical education within university curricula is essential to ensure the formation of a balanced lifestyle and the prevention of health risks associated with sedentary behavior, which is increasingly prevalent among young adults due to academic demands and technological advances (Kashuba, 2020).

Numerous studies confirm that participation in regular physical activity positively influences cognitive functions, emotional stability, and academic performance, which underscores the multidimensional benefits of physical culture in educational contexts (Balsevich, 2015; Maltsev, 2021).

Moreover, the World Health Organization (WHO, 2018) emphasizes the importance of physical activity in preventing non-communicable diseases and promoting mental health among youth populations. This global perspective resonates with the European Commission's initiatives that advocate for embedding sport and physical activity in educational frameworks to enhance overall student well-being and social inclusion (European Commission, 2022).

Despite this recognized importance, many higher education institutions face challenges in effectively implementing physical education programs. These challenges include insufficient infrastructure, lack of qualified personnel, and low motivation among students to engage in physical activities (Kovalchuk, 2023). Addressing these issues requires a strategic approach, involving the modernization of curricula, incorporation of innovative technologies, and the creation of supportive environments that encourage lifelong physical activity habits (Maltsev, 2021; Kashuba, 2020).

In this context, the development of physical education in universities is not merely about enhancing physical fitness; it is an essential component of forming a holistic personality capable of adapting to the complexities of modern life. It contributes to the realization of health-preserving educational paradigms, fostering resilience, social responsibility, and a proactive attitude toward personal well-being (Andrushchenko, 2012).

Thus, this article aims to analyze the current state of physical education in higher education institutions, identify key problems, and propose strategic directions for its improvement, based on both national experiences and international best practices.

1. Historical and Pedagogical Foundations of Physical Education in HEIs

The traditions of physical education in Ukraine's higher education institutions (HEIs) trace back several centuries, reflecting a deep-rooted cultural and educational heritage. One of the earliest centers of learning, the Kyiv-Mohyla Academy, founded in the 17th century, played a pioneering role in shaping the foundations of holistic education, including physical training as part of the overall development of students (Andrushchenko, 2012). This historical legacy established a precedent for integrating physical culture into academic life, which continued to evolve through various socio-political transformations.

During the Soviet era, physical education was institutionalized as a mandatory component of the curriculum across all higher education institutions in Ukraine and other Soviet republics. The emphasis was not only on developing physical fitness but also on cultivating collective discipline and ideological conformity aligned with the principles of socialist realism (Balsevich, 2015). Physical training programs were designed to support state goals such as military readiness and labor productivity, often at the expense of individual interests and well-being (Kashuba, 2020). While the system ensured widespread participation in physical activity, its prescriptive and ideological nature limited the scope for personalized approaches or consideration of students' diverse needs.

Since Ukraine's independence and subsequent integration into European educational frameworks, the approach to physical education in HEIs has undergone significant transformation. Modern methodologies emphasize student-centered learning, promoting autonomy, motivation, and engagement tailored to individual interests and capacities (Maltsev, 2021). The alignment with the Bologna Process and European Higher Education Area (EHEA) standards has encouraged universities to adopt innovative pedagogical practices, integrating interdisciplinary knowledge and digital technologies to enhance physical education programs (European Commission, 2022). This paradigm shift reflects a broader understanding of health and physical culture as integral to lifelong well-being rather than merely fulfilling formal academic requirements.

Thus, the evolution of physical education in Ukrainian universities demonstrates a complex interplay between historical traditions, political influences, and contemporary educational reforms aimed at fostering a more holistic, inclusive, and flexible system of physical training and sport (Kovalchuk, 2023).

2. Current State of Physical Education in Universities

Despite the existence of legal frameworks mandating physical education as a compulsory component of university curricula, the actual level of student participation in physical activity remains considerably below the desired standards. Research indicates that a significant proportion of students lead sedentary lifestyles, which negatively affects their physical health and academic performance (Kovalchuk, 2023). Several interrelated challenges contribute to this unsatisfactory state.

First and foremost, many higher education institutions suffer from insufficient material and technical resources, such as outdated sports facilities, lack of modern equipment, and limited access to safe and accessible training environments (Maltsev, 2021). This infrastructural deficit directly hinders the quality and attractiveness of physical education programs, discouraging students from engaging regularly in sports and exercise.

Secondly, student motivation toward physical activity is generally low, which is attributed to various psychosocial factors including academic stress, lack of awareness about the benefits of physical fitness, and competing interests such as part-time jobs or social activities (Kashuba, 2020). The modern student's lifestyle, dominated by digital technologies and screen time, further reduces spontaneous physical movement, creating additional barriers to participation (European Commission, 2022).

Academic overload is another critical factor. The intense demands of higher education, including a heavy course load, exams, and research commitments, often leave students with little time or energy to devote to physical education classes or extracurricular sports activities (Balsevich, 2015). This overload creates a conflict between academic responsibilities and the need for regular physical exercise, leading many students to prioritize the former.

Moreover, the shortage of qualified physical education instructors in many universities undermines the delivery of high-quality programs. Limited numbers of trained professionals, coupled with insufficient ongoing professional development opportunities, result in outdated teaching methods and reduced student engagement (Kovalchuk, 2023). Without skilled educators who can inspire and guide students effectively, physical education fails to fulfill its educational and health-related goals.

Finally, weak coordination among various administrative bodies, including university management, local sports organizations, and health authorities, hampers the development of coherent and supportive policies for physical education (Maltsev, 2021). This lack of inter-agency collaboration leads to fragmented efforts, inefficient resource allocation, and missed opportunities for promoting student physical activity on a broader scale.

Addressing these multifaceted problems requires comprehensive strategic interventions aimed at upgrading infrastructure, enhancing instructor qualifications, fostering student motivation through innovative pedagogies, balancing academic workloads, and strengthening institutional cooperation (Andrushchenko, 2012; European Commission, 2022). Only through such integrated efforts can higher education institutions realize the full potential of physical education in promoting student health and well-being.

3. The Role of Physical Culture in Promoting a Healthy Lifestyle

Physical education plays a vital role not only in the physical development of students but also in enhancing their mental and emotional well-being, which is increasingly recognized as a critical component of holistic education. Regular engagement in physical activities has been shown to reduce levels of stress and anxiety, improve mood, and foster greater resilience against psychological challenges faced by university students (Balsevich, 2015; Maltsev, 2021). These benefits are particularly important in the context of higher education, where academic pressures, social adjustments, and future career uncertainties can significantly impact students' mental health (Kashuba, 2020).

Moreover, physical activity contributes to increasing students' work capacity and cognitive performance by improving blood circulation, oxygen supply to the brain, and stimulating the release of neurotrophic factors that enhance learning and memory (Andrushchenko, 2012). As a result, students who participate regularly in physical education tend to demonstrate better concentration, creativity, and academic success compared to their less active peers (European Commission, 2022). This multidimensional impact highlights the importance of incorporating physical education as an integral part of the educational process, rather than treating it as a peripheral or optional activity.

In this context, the concept of "health-preserving education" emerges as a crucial educational paradigm that promotes the integration of physical culture and healthy lifestyle principles into all areas of professional training. Health-preserving education aims to create an environment that supports physical, mental, and social well-being, enabling students to maintain and enhance their health throughout their academic journey and beyond (Kovalchuk, 2023). This approach involves designing curricula that not only include physical education classes but also encourage active breaks, ergonomic study environments, psychological support, and awareness-raising about healthy behaviors.

Implementing health-preserving education requires systemic changes at the institutional level, including training educators to recognize and address health-related issues, adapting schedules to reduce sedentary time, and fostering a campus culture that values and facilitates regular physical activity (Maltsev, 2021). It also calls for interdisciplinary collaboration between departments of physical education, psychology, medicine, and pedagogy to

develop comprehensive programs that meet the diverse needs of students (Khalilov, Aliyev, Guliyeva & Babayeva, 2024).

Ultimately, the promotion of physical culture within the framework of health-preserving education is essential for preparing well-rounded graduates who are physically fit, mentally resilient, and capable of contributing effectively to society. By prioritizing students' holistic health, higher education institutions fulfill their social responsibility and support the sustainable development of human capital (European Commission, 2022).

4. Sports in the Structure of Higher Education

An essential component of physical education within higher education institutions is student sports, which go beyond merely promoting physical fitness to fostering critical social and personal competencies. Participation in organized sports competitions provides students with valuable opportunities to develop leadership skills, a sense of responsibility, discipline, and effective teamwork abilities (Balsevich, 2015). These competencies are transferable to academic, professional, and social contexts, making student sports a significant contributor to holistic student development (Kashuba, 2020).

Engagement in competitive sports encourages students to set goals, manage time efficiently, and overcome challenges, thereby enhancing their problem-solving skills and resilience (Maltsev, 2021). Moreover, team sports cultivate interpersonal communication, cooperation, and conflict resolution skills, which are essential for successful collaboration in diverse work environments and societal settings (Andrushchenko, 2012). Leadership experiences gained through captaining teams or organizing events further prepare students to assume responsibilities in their future careers and community roles.

University sports leagues, sports clubs, and student federations serve as vital institutional frameworks supporting this aspect of physical education. These organizations provide structured platforms for training, competition, and social interaction, thereby creating a vibrant sports culture on campus (Kovalchuk, 2023). For example, university leagues facilitate regular competitions that motivate students to maintain physical activity levels and strive for excellence. Sports clubs often offer specialized training and foster a sense of belonging among participants, which enhances student retention and satisfaction (European Commission, 2022).

Student federations play a particularly important role by advocating for student athletes' interests, organizing large-scale tournaments, and liaising with national sports bodies and educational authorities to secure resources and recognition. These federations often function as incubators for young talent, bridging the gap between amateur university sports and professional athletic careers (Balsevich, 2015).

International experience shows that universities which actively support student sports demonstrate higher rates of student engagement, improved health outcomes, and stronger community ties. Countries with developed university sports systems, such as the United States and several European nations, have integrated sports into their educational missions, recognizing it as a tool for social inclusion, cultural exchange, and lifelong health promotion (European Commission, 2022).

Therefore, fostering student sports within higher education not only contributes to physical development but also supports the formation of well-rounded, socially competent individuals

equipped with skills essential for personal and professional success. Strategic investment in sports infrastructure, qualified coaching staff, and administrative support is necessary to maximize these benefits and ensure sustainable sport development at universities (Maltsev, 2021; Kovalchuk, 2023).

5. Innovative Approaches in Physical Education

Modern technologies have revolutionized the organization and delivery of physical education, opening up a wide range of innovative possibilities that enhance student engagement, personalize learning experiences, and improve the effectiveness of training programs. One of the most significant advancements is the use of mobile applications to track physical activity. These apps enable students to monitor their exercise routines, set personalized fitness goals, and receive real-time feedback, which fosters motivation and accountability (Maltsev, 2021). The accessibility of smartphones means that students can integrate physical activity into their daily lives more easily, turning exercise into a measurable and interactive experience (European Commission, 2022).

Virtual reality (VR) and augmented reality (AR) technologies are also being increasingly utilized in physical education. These immersive tools create simulated environments where students can practice skills, experience sports scenarios, and receive immediate, visual feedback on their performance (Kashuba, 2020). For example, VR can simulate complex movements or competitive situations that are difficult to replicate in traditional settings, enhancing both cognitive and physical aspects of training (Balsevich, 2015). AR overlays digital information onto the real world, allowing for interactive coaching and guided exercises, which can be especially beneficial in teaching correct techniques and preventing injuries (Khalilov, Aliyev & Zeynalov, 2024).

The rise of online classes and video workouts has further expanded the accessibility of physical education, especially in the context of the COVID-19 pandemic, which necessitated remote learning solutions. These platforms offer flexibility, enabling students to participate in guided physical activity sessions anytime and anywhere, thus overcoming barriers related to time, location, and facility availability (Kovalchuk, 2023). Additionally, online resources often incorporate multimedia elements such as instructional videos, live coaching, and peer interaction, which enrich the learning experience and maintain motivation (Khalilov, Alikhanov, Hasanov & Ahmadova, 2024).

Gamification is another promising approach that leverages game-design elements—such as point scoring, competition, and rewards—to make physical education more engaging and enjoyable. By transforming exercise into a game-like activity, gamification encourages consistent participation, goal achievement, and social interaction among students (European Commission, 2022). Examples include fitness challenges, leaderboards, and virtual rewards that recognize progress and foster a sense of community and friendly competition (Kashuba, 2020). Research shows that gamified physical education programs increase adherence to exercise routines and improve overall fitness outcomes, particularly among younger adults who are digital natives (Balsevich, 2015).

Incorporating these modern technologies into physical education curricula requires strategic planning, investment in infrastructure, and training for educators to effectively utilize digital tools (Maltsev, 2021). Moreover, it is essential to ensure equitable

access to technology to prevent widening the digital divide among students (Andrushchenko, 2012). When successfully integrated, these innovations have the potential to transform physical education from a traditional, often repetitive activity into a dynamic, personalized, and interactive learning process that meets the needs of today's students.

6. International Experience

In many European and North American countries, physical education is not treated as an isolated discipline but is effectively integrated into the broader general education system through a variety of innovative and interdisciplinary approaches. These approaches often include interdisciplinary courses that combine physical education with subjects such as health sciences, psychology, and nutrition, fostering a more comprehensive understanding of wellness and lifestyle management among students (European Commission, 2022). Such integration supports the development of critical thinking about health behaviors and encourages students to adopt lifelong habits that promote physical and mental well-being.

Mentoring programs are another widely implemented strategy in these regions. These programs pair students with trained mentors or peer coaches who provide guidance, motivation, and personalized feedback on physical activity and sports participation (Balsevich, 2015). Mentorship facilitates not only the acquisition of sport-specific skills but also supports social and emotional learning, thereby enhancing student engagement and retention in physical education activities (Kashuba, 2020). This relational approach fosters a supportive environment that encourages sustained physical activity beyond compulsory classes.

A particularly effective and increasingly popular model in these countries is the implementation of credit systems for participation in physical activities. Under such systems, students earn academic credits for engaging in sports, fitness programs, or physical education courses, which count toward their graduation requirements (Maltsev, 2021). This incentivizes students to take an active role in maintaining their physical health while balancing academic responsibilities. The credit system is often flexible, allowing students to choose from a variety of physical activities that suit their interests and fitness levels, thereby promoting autonomy and personal responsibility (Khalilov, Adilzade, Rzayev, Guliyev, & Yusifova, 2024).

Moreover, this model supports the recognition of diverse forms of physical activity, including individual sports, team sports, recreational activities, and even fitness training, thereby broadening the scope of physical education (Kovalchuk, 2023). By formalizing physical activity as part of the academic credit structure, universities send a clear message about the value of health and fitness as integral components of higher education.

Research indicates that such integrated systems improve student participation rates in physical activities and contribute to better health outcomes, reduced stress, and improved academic performance (European Commission, 2022; Balsevich, 2015). Countries like Germany, Finland, and Canada have been cited as successful examples where these interdisciplinary and credit-based physical education models have been effectively institutionalized (Maltsev, 2021). These models align well with global educational trends emphasizing holistic student development and lifelong health.

Overall, the integration of physical education into general education through interdisciplinary courses, mentoring programs, and credit systems represents a progressive framework that enhances student motivation, supports diverse learning needs, and fosters sustainable physical activity habits. Such models provide valuable lessons for other higher education systems seeking to modernize and improve their physical education programs.

7. Proposals and Recommendations

To effectively address the challenges facing physical education in higher education institutions, a multifaceted and strategic approach is required. One of the primary steps is to ensure adequate and sustained funding dedicated specifically to physical education programs. Financial investment is critical for modernizing sports infrastructure, acquiring up-to-date equipment, and supporting the professional development of physical education instructors (Kovalchuk, 2023). Without sufficient funding, it is difficult to create and maintain high-quality programs that attract and retain student participation (Maltsev, 2021).

Updating curricula to reflect contemporary needs and scientific advancements in health and physical education is equally important. Curricular reforms should incorporate interdisciplinary content, promote inclusive and adaptive physical activities, and integrate digital technologies to enhance engagement and effectiveness (European Commission, 2022). Curricula must also be flexible enough to accommodate diverse student interests and abilities, ensuring that all students can benefit regardless of their physical condition or prior experience (Aliyev, Valiyev, Huseynova & Khalilov, 2025).

Creating an environment conducive to mass sports participation is another vital component. This involves not only improving the physical environment—such as building accessible sports facilities and safe outdoor spaces—but also fostering a campus culture that values and encourages regular physical activity (Balsevich, 2015). Awareness campaigns, motivational programs, and student-led initiatives can contribute to making physical activity a normative and enjoyable part of university life (Kashuba, 2020).

Introducing personalized physical activity trajectories tailored to individual student needs and goals represents a modern pedagogical approach that increases motivation and adherence. Personalized plans can consider students' health status, fitness levels, preferences, and academic schedules, thereby making physical education more relevant and effective (Maltsev, 2021). Technology such as fitness trackers and mobile apps can support this personalization by providing feedback and facilitating goal setting (European Commission, 2022).

Finally, strengthening collaboration among educational institutions, local sports clubs, and municipalities is essential for creating an integrated support system for student physical activity. Such partnerships can expand opportunities for sports participation beyond campus boundaries, provide access to specialized facilities and coaching, and enable coordinated health promotion campaigns (Kovalchuk, 2023). Inter-agency cooperation also helps optimize resource allocation and policy coherence, ensuring that efforts to promote physical education are comprehensive and sustainable (Andrushchenko, 2012).

In conclusion, improving physical education in higher education demands a holistic strategy encompassing funding, curricular innovation, supportive environments, personalized approaches, and institutional collaboration. These measures, informed by best

practices and research, will contribute to fostering healthier, more active student populations capable of achieving both academic success and lifelong well-being (European Commission, 2022; Balsevich, 2015).

Conclusion

Physical education in higher education institutions is not merely an auxiliary discipline but a foundational component of comprehensive student development. It plays a crucial role in shaping individuals who are not only academically competent but also physically healthy, emotionally stable, and socially responsible. The effective implementation of physical education programs contributes significantly to the promotion of healthy lifestyles, the reduction of morbidity rates, and the overall improvement of educational quality. When students maintain a regular regimen of physical activity, they tend to exhibit lower levels of absenteeism, enhanced mental focus, and improved academic performance, outcomes that underscore the value of integrating physical culture within the academic framework.

The broader public health implications of physical education also cannot be overstated. University years are often a formative period in which lifelong habits are established. Physical education, when well-structured, provides students with the knowledge, skills, and motivation necessary to sustain an active lifestyle well into adulthood. This, in turn, contributes to reducing the incidence of non-communicable diseases, such as cardiovascular disorders, obesity, and type 2 diabetes, which are often linked to sedentary behaviors developed during youth.

However, the modern context presents a set of complex challenges that necessitate a reassessment of how physical education is perceived and delivered. The digitalization of learning environments, increased academic pressures, mental health crises, and a general decline in physical activity among youth all demand innovative responses from educators and policymakers. Traditional models of physical education, which often emphasize standardized exercise routines and one-size-fits-all approaches, are insufficient to meet the diverse needs of today's student populations.

In light of these challenges, it is imperative to reconceptualize the role of physical culture in higher education. Institutions must embrace innovative pedagogical methods, including the integration of digital technologies (e.g., virtual coaching, gamified fitness apps), the adoption of personalized physical activity plans, and the implementation of credit-based incentives for participation in sport. Additionally, interdisciplinary collaboration—with input from departments of public health, psychology, education, and information technology—can foster a more holistic and impactful physical education experience.

Ultimately, enhancing the effectiveness of physical education requires institutional commitment, systemic policy support, and an educational philosophy that views student well-being as inseparable from academic success. By prioritizing physical culture as a strategic element of university life, higher education institutions not only fulfill their duty to promote student health but also contribute to the formation of an active, resilient, and productive generation of citizens.

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