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WAYS OF USING MODERN TECHNOLOGIES IN IMPROVING THE QUALITY OF SPORTS AND PHYSICAL EDUCATION IN THE HIGHER EDUCATION SYSTEM

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Abstract: This article is devoted to the analysis of the role of innovative technologies in improving the quality of physical culture and sports education in the higher education system and methods of their effective application. Today, the field of physical education and sports is moving to a new level as a result of the rapid development of information and communication technologies. The article considers the possibilities of interactively forming sports skills through the use of virtual reality (VR) and augmented reality (AR) technologies, individualizing the educational process using online training platforms and distance learning systems. Also, the analysis of sports data, the use of programs based on artificial intelligence, automation of training processes and decision-making based on analytical results are recognized as methodological innovations. These innovative approaches serve to increase the efficiency of sports education, fully reveal the potential of students, and train personnel based on modern requirements.

Keywords: higher education, physical culture, sports education, innovative technologies, virtual reality, augmented reality, distance learning, artificial intelligence, sports analytics.

Introduction

The higher education system plays a significant role in the development of physical culture and sports education. Sports education helps to develop not only physical health, but also social skills such as personal qualities, teamwork, strategic thinking and goal-setting. At the same time, the use of innovative technologies in the process of teaching sports and physical culture can further increase its effectiveness. Nowadays, technologies have entered the educational process, creating many new opportunities for sports teachers and students. Physical education programs in higher educational institutions serve to increase the physical activity of students, reduce stress, develop individual sports, and form a healthy lifestyle. Physical education not only ensures the strengthening of the body, but also develops students spiritually and socially. This, in turn, helps to improve the overall quality of students' education and achieve effective results in their academic activities. The main goal of physical education in the higher education system is to increase the general physical fitness of students and develop their interest in sports.

The following main directions are taken into account in the implementation of this process: strengthening the muscular system, cardiovascular and respiratory systems of students, increasing physical fitness, teaching students to regularly engage in physical education and sports activities, promoting a healthy lifestyle, and developing teamwork skills through physical education. After Uzbekistan gained its independence, physical education and sports, like all other areas, have taken shape in a completely new direction and are flying high. Indeed, under the initiative and direct leadership of our first President I.A. Karimov, the Law "On Physical

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Education and Sports" (1992, 2000, 2015), the adoption of decrees and government resolutions on the development of football, wrestling, tennis and other sports, have become an important factor in the development of physical education and sports in our country.

Physical culture is a system aimed at the physical development of a person, physical activity and the development of skills in the field of sports. This term includes not only sports, but also a healthy lifestyle, physical activity and a system of physical education. The main goal of physical culture is to improve a person's physical health, improve his physical and mental condition, develop social skills and expand a healthy lifestyle in society. The history of the development of physical culture begins with ancient Greek and Roman times. In Greece, the "Gymnasion" (school of physical exercises) operated, where not only physical training, but also intellectual and spiritual development were carried out.

In Rome, the popularization of physical culture and military training played an important role. The history of physical education is divided into four main periods: Physical education in the ancient world (8th millennium BC - 4th century AD). Physical education and sports in the Middle Ages (5th - 17th centuries). Physical education and sports in the modern era (18th - late 19th centuries). Physical education and sports in the most modern era (early 20th century present day) Although there were sharp crises in physical culture during the Middle Ages, in the 18th and 19th centuries, especially in Europe, sports and physical education began to develop again. During this period, the first sports clubs were founded and attention began to be paid to the important social and health-improving role of physical culture. In the 20th century, physical culture became popular around the world and the global history of sports, physical education and a healthy lifestyle began. Sports events, physical education classes and competitions in various sports became widespread. At the same time, physical culture gained importance not only for professional athletes, but also for the general public. The main types and activities of physical culture are as follows, sports: The most common and basic type of physical culture, sports are carried out in various forms, such as team sports, individual sports, swimming, gymnastics, etc. Sports activities increase physical activity, and are also important for mental and social development. Physical Education: Physical education education is aimed at the physical development of the younger generation.

In this area, schools, universities and sports centers teach physical activity to students, youth and adults. Fitness and Aerobics: As another type of physical culture, fitness and aerobics are widely popular. These physical activities support a healthy lifestyle and help to tone the body. Aerobics and fitness exercises not only improve physical condition, but also help reduce stress. Rehabilitation and physical recovery: Rehabilitation is the process of recovering from injuries and returning to sports activities. Rehabilitation plays an important role in physical culture, as this process helps to restore a person's healthy activity and restore his health. In recent years, the use of innovative technologies in sports education has helped to conduct sports activities effectively and with high quality, make the educational process interactive and modern. These technologies are aimed at increasing the physical and mental potential of athletes, analyzing and optimizing their performance, and improving the pedagogical methods of physical education teachers. Wearable technologies:

With the help of these technologies, athletes monitor their physical condition and optimize training programs. For example, devices such as Fitbit, Garmin, Polar allow athletes to measure heart rate, number of steps, maximum and average speed, respiration and other physical

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indicators. The Concept for the Development of Physical Education and Sports in the Republic of Uzbekistan until 2025 pays special attention to issues such as "... introduction of other modern methods and directions in the field of sports", "... development of training programs for sports schools in sports taking into account modern sports technologies". Therefore, it is important to familiarize sports trainers with innovative educational technologies in the retraining and advanced training courses for physical education and sports specialists, in order to increase their intellectual potential and enrich their worldview.

Virtual Reality (VR) – Allows athletes to train and prepare without being in a real situation or on a real sports field during the training process. For example, a football or basketball player can improve their skills by imagining different situations (passing, attacking, defending) on virtual field. VR technologies help to strengthen the psychological preparation of athletes, save time and make training more interesting. Augmented Reality (AR) – with the help of technology, athletes and teachers can observe the training process more interactively and in real time. For example, athletes are given virtual assistant instructions or instructions on a real field during training. These technologies can be used in training athletes, for example, in learning sports techniques, in training. With the help of innovative technologies, athletes and teachers can optimize their activities and increase efficiency, analyze athletes' movements and exercises in real time, and see results immediately, which allows athletes to improve quickly. Providing physical education remotely is a new approach that allows students and pupils to perform physical exercises and sports activities at home or elsewhere using online platforms. Distance learning, especially during the pandemic, has become widespread as an alternative to traditional education systems. Teaching physical education remotely means providing individualized support for students' activities and optimizing the learning process using technology. Video conferencing systems such as Zoom, Microsoft Teams, Google Meet allow students to perform exercises directly and establish interactive communication with teachers. Distance physical education can be made more interesting and interactive to increase student motivation through gamification. For example, encouraging physical activity through special assessment systems will further increase students' interest in sports.

Conclusion

The effective use of innovative technologies in improving physical education and sports education in the higher education system plays a major role in making the educational process interactive, interesting and effective. Technological innovations such as virtual and augmented reality technologies, online platforms, artificial intelligence and data analysis help students develop, and sports teachers organize their work effectively. These technologies also greatly help sports students improve their performance, perform exercises correctly and exercise self-control. In order to further improve the quality of physical education and sports education with the help of innovative technologies, teachers and students need to jointly apply modern methods in practice. The use of innovative technologies in sports education helps to improve the physical development, technique and psychological state of athletes.

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6.995, 2024 7.75

References:

- 1. Ismoilov, H. (2024). ANALYSIS OF THE CRITERIA FOR SELECTING YOUNG ATHLETES SPECIALIZING IN SPRINT DISTANCES. Journal of universal science research, 2(10), 174-182.
- 2. Husniddin, I. (2025). YUQORI SINF O'QUVCHILARINI YENGIL ATLETIKA SPORT TURIGA INTELEKTUAL QIZIQISHINI OSHIRISH YO'LLARI. PEDAGOGIK TADQIQOTLAR JURNALI, 2(2), 278-283.
- 3. Ikramov, A. A., & ISMAILOV, H. (2022). WAYS TO INCREASE THE INTELLECTUAL INTEREST OF HIGH SCHOOL STUDENTS IN THE SPORT OF ATHLETICS. THEORETICAL & APPLIED SCIENCE Учредители: Теоретическая и прикладная наука, (4), 560-564.
- 4. Husniddin, I. (2025). JISMONIY TARBIYA SOG'LOM TURMUSH TARZINING ASOSI. PEDAGOGIK TADQIQOTLAR JURNALI, 3(1), 131-135.
- 5. Исмаилов, X. (2025). ПЛАНИРОВАНИЕ СТРУКТУРЫ И СОДЕРЖАНИЯ ЛЕГКОАТЛЕТИЧЕСКИХ ТРЕНИРОВОК. PEDAGOGIK TADQIQOTLAR JURNALI, 2(2), 135-143.
- 6. Husniddin, I. (2025). YENGIL ATLETIKA MASHQLARINING UMUMIY HARAKTERISTIKASI. PEDAGOGIK TADQIQOTLAR JURNALI, 3(1), 735-739.
- 7. Husniddin, I. (2025). YENGIL ATLETIKA MASHQLARINI O 'RGATISH METODIKASI. PEDAGOGIK TADQIQOTLAR JURNALI, 3(1), 760-767.
- 8. Husniddin, I. (2025). YENGIL ATLETIKANING METODOLOGIYASI. PEDAGOGIK TADQIQOTLAR JURNALI, 3(1), 755-759.
- 9. Husniddin, I. (2025). MUSOBAQA DAVRIDA YENGIL ATLETIKACHILARNING PSIXOLOGIK TAYYORGARLIGINI YAXSHILASH. PEDAGOGIK TADQIQOTLAR JURNALI, 3(1), 740-744.
- 10. Husniddin, I. (2025). QISQA MASOFALARGA YUGURISHNING TAHLILI VA NATIJALARI. PEDAGOGIK TADQIQOTLAR JURNALI, 3(1), 745-749.
- 11. Husniddin, I. (2025). YENGIL ATLETIKA BOYICHA MUSOBAQALARNI TASHKIL ETISH VA OTKAZISH. PEDAGOGIK TADQIQOTLAR JURNALI, 3(1), 768-772.