FORMATION OF A DIGITAL CULTURE OF FUTURE SPECIALISTS IN THE FIELD OF PHYSICAL EDUCATION AND SPORTS

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https://doi.org/10.5281/zenodo.17811159

Abstract: Abstract The rapid digital transformation of society necessitates the integration of digital competencies into the professional training of future specialists in physical education and sports. This article examines the theoretical foundations and practical approaches to the formation of digital culture among students in higher educational institutions. The study analyzes the role of modern digital technologies in enhancing educational effectiveness, improving methodological support, and fostering innovative pedagogical practices. Based on the conducted research, key components of digital culture in the context of physical education and sports are identified, including information literacy, digital communication skills, and the ability to apply technological tools in professional activities.

Keywords: digital culture, physical education, sports, professional training, digital competencies, educational technologies.

JISMONIY TARBIYA VA SPORT SOHASIDAGI KELAJAK MUTAXASSISLARINING RAQAMLI MADANIYATINI SHAKLLANTIRISH

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Annotasiya: Xulosa Jamiyatning tezkor raqamli o'zgarishi jismoniy tarbiya va sport bo'yicha bo'lajak mutaxassislarni kasbiy tayyorlashga raqamli kompetensiyalarni integratsiyalashni taqozo etadi. Ushbu maqolada oliy ta'lim muassasalari talabalari orasida raqamli madaniyatni shakllantirishning nazariy asoslari va amaliy yondashuvlari ko'rib chiqiladi. Tadqiqotda zamonaviy raqamli texnologiyalarning ta'lim samaradorligini oshirish, metodologik yordamni takomillashtirish va innovatsion pedagogik amaliyotlarni rivojlantirishdagi roli tahlil qilinadi. O'tkazilgan tadqiqotlar asosida jismoniy tarbiya va sport kontekstida raqamli madaniyatning asosiy komponentlari, jumladan, axborot savodxonligi, raqamli muloqot ko'nikmalari va texnologik vositalarni professional faoliyatda qo'llash qobiliyati aniqlanadi.

Kalit so‘zlar: raqamli madaniyat, jismoniy tarbiya, sport, kasbiy tayyorgarlik, raqamli kompetensiyalar, ta'lim texnologiyalari.

ФОРМИРОВАНИЕ ЦИФРОВОЙ КУЛЬТУРЫ БУДУЩИХ СПЕЦИАЛИСТОВ В ОБЛАСТИ ФИЗИЧЕСКОЙ КУЛЬТУРЫ И СПОРТА

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Аннотация: Аннотация: Стремительная цифровая трансформация общества обусловливает необходимость интеграции цифровых компетенций в профессиональную подготовку будущих специалистов в области физической культуры и спорта. В статье рассматриваются теоретические основы и практические подходы к формированию цифровой культуры студентов высших учебных заведений. Проанализирована роль

современных цифровых технологий в повышении эффективности образования, совершенствовании методического обеспечения и развитии инновационной педагогической практики. На основе проведенного исследования выделены ключевые компоненты цифровой культуры в сфере физической культуры и спорта, включая информационную грамотность, навыки цифрового общения и умение применять технологические инструменты в профессиональной деятельности.

Ключевые слова: цифровая культура, физическая культура, спорт, профессиональная подготовка, цифровые компетенции, образовательные технологии.

INTRODUCTION

The formation of digital culture among future professionals is becoming a key factor in ensuring their competitiveness and adaptability to the rapidly changing demands of the labor market. In the field of physical culture and sports, the development of digital competencies is particularly relevant, as modern training, monitoring, and performance analysis increasingly rely on technological tools, online platforms, and data-driven decision-making.

In professional education, digital culture is understood not only as the ability to use technical devices and software, but also as a set of values, attitudes, and ethical principles that define the use of digital resources. In physical culture and sports, it encompasses skills in working with fitness applications, motion analysis systems, wearable devices, virtual training environments, as well as digital communication platforms for coaching and teaching activities.

Despite the growing importance of digital tools, many universities face difficulties in systematically integrating the development of digital culture into educational programs in physical culture and sports. This calls for a comprehensive study of theoretical foundations, pedagogical methods, and practical solutions that can effectively contribute to the formation of digital culture among future specialists. The present study aims to analyze these aspects, identify the key components of digital culture for professionals in this field, and develop recommendations for its integration into professional training programs.

RESEARCH METHOD

The study employed a mixed-method approach, combining quantitative and qualitative methods for a comprehensive examination of the formation of digital culture among future specialists in the field of physical education and sports.

The study involved 90 undergraduate students (2nd–3rd years) studying at the Faculty of Arts and Sports, specializing in Physical Education. For assessing digital competencies, attitudes toward technology, and the frequency of using digital tools in professional training. Observation: Monitoring students' use of digital tools during practical classes. An adapted version of the Digital Competence Framework (DigComp) was used in the study, supplemented with questions reflecting the specifics of physical education and sports.

RESULT

The study results show that the integration of digital technologies into the educational process significantly increases the level of professional training of students in the field of physical culture and sports. After the implementation of the experimental program, students in the experimental group demonstrated 20% higher proficiency in using digital tools for sports analysis, online training management, and data visualization compared to the control group.

A significant improvement was observed in competencies related to the use of specialized software (such as Dartfish, Coach's Eye, Polar Flow) for biomechanical analysis and training

process monitoring. In addition, the proportion of students capable of independently developing digital educational materials for sports training increased from 30% to 70%.

Survey results revealed positive changes in students' attitudes toward digital innovations: 80% of respondents noted that the integration of digital tools made the learning process more engaging, interactive, and aligned with modern professional requirements. Indicators of digital culture—such as information literacy, ethical use of technology, and the ability to work in online collaborative projects—also grew significantly, with an average increase of 20% across all assessment criteria.

Overall, the study confirmed that the systematic integration of digital technologies into physical education curricula contributes to the development not only of technological skills but also of a wide range of professional competencies essential for future specialists in the context of the digitalization of the sports sector.

DISCUSSION

The results of the study confirm that the integration of digital technologies into the professional training of future specialists in physical education and sports plays a key role in shaping their digital culture. The substantial improvement in students' competencies—particularly in the use of software for sports performance analysis, online learning management, and the creation of digital educational content—demonstrates that technological literacy is becoming an essential component of professional readiness in the sports field.

The positive dynamics observed in the targeted group of students are consistent with the findings of previous research, which show that digital tools can enhance motivation, interactivity, and personalization in the educational process. In our case, the increase in engagement reported by 80% of students indicates that modern digital platforms not only improve learning efficiency but also contribute to fostering a deeper interest in the subject matter.

An important aspect revealed by the study is the development of ethical and information literacy skills. In the era of rapid digitalization, future professionals must be able to critically evaluate information, use technology responsibly, and ensure data confidentiality in sports contexts. This aligns with international educational standards that emphasize the importance of digital citizenship in higher education.

Nevertheless, the study also identified certain challenges. Some students initially resisted the introduction of new technologies, citing difficulties in mastering software tools and limited access to high-performance devices. This highlights the need for institutional support, including the development of technical infrastructure and the training of future specialists in digital pedagogy.

Overall, the discussion shows that the formation of digital culture is not limited to teaching software skills—it requires a comprehensive approach that combines technical training, the development of ethical responsibility, and the ability to meaningfully integrate technology into professional practice.

CONCLUSION

The formation of digital culture among future specialists in physical education and sports is a strategic priority in the modernization of professional training. The study has shown that the integration of digital technologies into the educational process enhances student motivation, develops their ability to work in a digital environment, and prepares them for the challenges of the modern sports industry. A systematic approach that combines theoretical training with the

development of practical digital skills enables the creation of competent, technologically literate, and innovative professionals

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