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DIGITAL TECHNOLOGIES IN PHYSICAL EDUCATION OF STUDENTS

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ABSTRACT

The purpose of the study was to identify the possibilities of using modern digital technologies in physical education of students in the educational environment of the university. At the first stage of the research, a theoretical analysis of publications devoted to various aspects of the use of digital technologies in physical education of university students was carried out. The research was based on the scientific journals "Theory and Practice of Physical Culture" and "Physical Culture: upbringing, education, training" for 2020-2021. At the second stage, a sociological survey of 1st year students of Surgut State University was conducted to identify the attitude of students to the use of mobile applications and electronic educational resources in the process of physical education.

Educational process, university, physical culture and sports, software and hardware, electronic

services, training

KEYWORDS

Introduction

At the present stage, the educational space of the university is rapidly transforming, which is associated with the use of digital technologies in the educational process. They reveal new technological and didactic possibilities for the implementation of training programs, allowing to diversify and improve the pedagogical process, make it more flexible and adaptive to the changing conditions of the educational, professional and social environment [1].

At the same time, the technical and software tools that form the basis of digital technologies are constantly becoming more complex, new data formats are emerging, so their use in the educational process requires expanding the knowledge of students and teachers about software applications, as well as improving their skills. In this regard, the purpose of the study was to identify the possibilities of using modern digital technologies in physical education of students in the educational environment of the university.

Based on the theoretical analysis of publications on the subject under study, it is possible to identify such digital technologies used in the educational environment of physical education as corporate web platforms, social networks, electronic libraries, software complexes for studying the functional state and physical fitness of students, video conferencing tools, google forms, cloud storage, mobile applications, hardware and software complexes

Technologically, the educational process of physical education in universities is organized as follows: all information is accumulated on educational web platforms, through which administrative, managerial and educational tasks are implemented; interaction between participants in the educational

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process is carried out within the framework of the online platform itself using digital tools built into it (chats, messaging services, video broadcasts classes) or through third-party web services (for example, Zoom, YouTube). It should be noted that the transition to these services is carried out via web links, and authorization is often required to use them. Among the educational web platforms in Russian universities, the most in demand are: Teams, Moodle, Blackboard, etc[2].

The experience of using Teams to organize independent work of students in physical education is shown in the work of A. E. Podolyak and O. B. Podolyak (Cherepovets). The authors noted that theoretical and methodological educational materials can be placed on the web platform, and testing can be carried out; use the chat to discuss the implementation of practical work to determine one's own functional state and physical fitness, carry out online demonstrations of developed and learned complexes in accordance with an individual program of wellness and physical training, taking into account the results obtained [4].

On another Blackboard web platform, as well as in Teams, you can create training courses and online tests, post theoretical and practical materials, and implement video components into the course program on physical culture and sports. A distinctive feature of Blackboard is the presence of the function of checking the text of the student's work for anti-plagiarism [5].

One of the most popular in the field of higher education is the Moodle web platform, which, along with the above services, provides a space for teachers and students to work together. Just like in Teams and Blackboard, Moodle offers opportunities for posting educational materials in text, tabular, multimedia format, and broadcasting classes in real time. The experience of using Moodle in physical education of students is presented in [6]. Moodle involves not only posting video instructions and instructional videos for students on the educational portal, but also feedback through various communication options with the teacher: specially created e-mail addresses for reports and questions, video chats, online consultations, and an integrated message service.

Video conferencing services are used to conduct online training sessions in real time, among which Zoom, Webinar, and Google Meet have found the greatest use in universities. They are not embedded in educational platforms, so to organize video broadcasts, you first need to schedule an event and then send students a link to it. As practice shows, these services are convenient to use within the framework of physical education disciplines to summarize and analyze the tasks performed by students in order to get away from the formal nature of their provision, for example, from copying the texts of reports or diaries of self-control [6]. It should be noted that in the same university, teachers can use different video conferencing systems. This "disconnection" complicates the process of connecting students via video communication, since each video conference requires its own registration and authorization, as well as the ability to quickly navigate the user interface.

Social networks, in particular the Internet resource, are services for remote communication and information exchange in the educational process. The experience of posting video tutorials of practical physical education classes in a specially created group demonstrates the convenience of this form of video transfer. Comments and "likes" when watching videos serve as feedback [7].

Libraries occupy an important place in the educational process, offering students and teachers publications for use in educational and research activities. Thanks to the development of the Internet, electronic libraries began to be created with a powerful scientific search apparatus that allows you to quickly find the necessary scientific and educational information. In the article by N. Yu. As an example of popular library services that are most in demand in the educational process of physical

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education at the university, the electronic portals Elibrary, Google Scholar, LinkedIn, ResearcherID, Scopus, etc. are given. At the same time, publications devoted to improving students' scientific information retrieval skills, increasing their interest in obtaining scientific knowledge in the field of physical culture and sports using the resources of electronic scientific libraries are not presented in the analyzed journals, which is due to the lack of interest of scientists in this problem.

Monitoring the health and physical fitness of students is one of the important components of the system for evaluating the effectiveness of physical education at the university. To date, it has become possible to accurately and promptly obtain student health indicators using computer-aided functional state research complexes. In modern practice, Esteck System Complex, Omega-M monitoring systems are used.

The advantage of such applications is not only in the accuracy and efficiency of measurements, but also in the fact that the client-server architecture allows you to work with them remotely.

Increasing the motivation of students for physical activity is the result of an effective pedagogical process for physical education. Questionnaires are used as tools for assessing the level of motivation. Currently, it is convenient to develop questionnaire forms and conduct questionnaires using Google cloud services (Google Forms and Google Drive) [9]. To do this, a link is created to a questionnaire posted on Google Drive, which is sent to survey participants via e-mail or displayed on the course page of an educational web portal, etc

Cloud storage such as Google Drive, Yandex. Disk, Dropbox, etc. are used to store an archive of educational materials in the form of various files. In the study by D. S. Savelyev and co-authors, these services created on the university's server were used to store diaries of students' self-control, which they filled out after a practical lesson.

E-mail is an effective and efficient way of direct interaction between teachers and students. As part of the educational process, it serves to receive and send links to web services containing educational information.

Today, various training programs for sports and physical culture and wellness are being actively used in the physical education of students. At the same time, such software applications can be installed both on a computer and on mobile devices. In the study by T. N. Shutova et al. Mobile applications are presented: Health, Muscle and Motion, Nike Run Club, Nike + Training Club, etc., which the authors used in their experience of conducting distance learning with students.

The use of hardware and software complexes (hereinafter referred to as APK) of video analysis in the process of performing physical exercises by students is becoming promising. The agro-industrial complex of video analysis allows for the assessment and correction of students' motor actions quickly and accurately, and to improve the quality of pedagogical control.

A theoretical analysis of the publications has shown that most of the research on the use of digital technologies in physical education is of an applied nature. As a rule, the vector of scientific interests is aimed at expanding the functionality of software tools, at forming a new didactic paradigm of elearning.

Often, the considered pedagogical research works note the undoubted positive quality of digital technologies associated with the ability to quickly receive and transmit information from anywhere in the world, create a variety of methodological materials, etc. However, the desire to increase the use of digital learning tools and expand the didactic potential of educational content can lead to redundancy, fragmentation of materials and inconsistency of their presentation. It is not taken into

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account that software tools are constantly being modified, and, accordingly, a lot of time is spent on mastering the technical skills of working with the updated interface and functionality. The current problematic situation may eventually affect the information overload of students and teachers.

In this regard, the results of a survey of students about their attitude to the possibility and necessity of using digital technologies during physical exercise and sports were of interest in this study. It was revealed that in the process of independent training and training sessions in physical culture and sports, more than half of the respondents (58%) use various sports gadgets, 41% of respondents replied that they do not use these devices, the rest of the respondents do not show any interest in them (Fig. 2). The majority of students (67%) cite "lack of opportunity to acquire them" as the main reasons, while 28% believe that "they are of no use."

At the same time, 70% of them believe that "they can find many training options on the Internet themselves," while the rest of the respondents are not interested in this method of training sessions. Based on the survey results, it can be concluded that students trust the training programs found on the Internet. At the same time, they do not have sufficient knowledge and sports experience in performing exercise techniques, which can lead to injury. In this regard, it becomes obvious that there is a need to improve the effectiveness of pedagogical management and control of physical education at the university through the use of digital technologies in both full-time and distance learning formats.

Thus, digital technologies used in physical education of students are firmly integrated into the

Thus, digital technologies used in physical education of students are firmly integrated into the educational process of the university. Along with this, the problems of universality of electronic educational services, simplification of the user interface, reduction of data redundancy at the technological level, as well as adequate selection and systematization of educational and methodological material, improvement of forms of control and evaluation of students' independent performance of practical exercises in physical culture and sports at the didactic level are being updated [3]. In this regard, research in the field of physical education in the context of digital transformation of education is becoming relevant.

Conclusion

Currently, an active search and scientific substantiation of new methodological approaches in the pedagogy of physical education in the context of digital transformation is underway, with the main emphasis on the educational aspect. However, the educational environment solves not only the tasks of learning, but also upbringing, which are not sufficiently considered in modern research.

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