Digital progress trends in national physical education and sports sector

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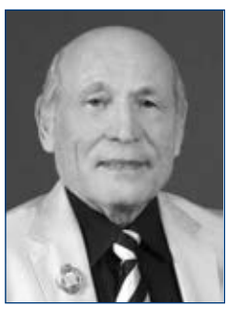

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Abstract

Objective of the study was to analyze the digital transformation experience in the physical education and sport sector on the whole and the physical education and sport specialist education system in particular.

Methods and structure of the study. We used in the study the following methods: analysis of the relevant theoretical and practical study reports; and summary of our own practical experience in the physical-education-and-sport-specific digital information technologies schooling, design and application.

Results and conclusion. Our analysis of the relevant theoretical and practical study reports and practical digital transformation implementation experiences in the national physical education and sport sector showed the physical education and sport specialist education, retraining and advanced training service being one of the most promising digital transformation progress trends. In this context, a special priority in the physical education-and-sport-specific digital transformation development projects will be given to the advanced training of the academic faculties to help them establish and use modern e-learning resources, develop knowledge and skills in a variety of modern online and mixed education service formats, and keep abreast with the modern physical education-and-sports-education-specific digital transformation progress trends to ensure high quality of their students' professional service in future.

Keywords: *digital transformation, physical education, e-learning resources, physical education and sport sphere.*

Background. The ongoing transition to the information society in the country is associated with a growing social demand for the specialist IT competences for progress of professional services in every sector (economics, medicine, education, physical education and sports, etc.) subject to digital transformation. The need for digital transformation is addressed by the relevant regulatory documents including the national Digital Economy Project and the IT Education Development Strategy of the Russian Federation for 2017-2030. Of special interest in this context are the main digital transformation policies for progress of the physical education and sport sector on the whole and physical education and sport specialist education system in particular and analyses of the relevant digital transformation application experiences.

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Methods and structure of the study. We used in the study the following methods: analysis of the relevant theoretical and practical study reports; and summary of our own practical experience in the physical-education-and-sports-specific digital information technologies schooling, design and application.

Results and discussion. Based on our practical physical education-and-sport-specific digital information technologies application experience, we would classify the application fields into the physical education and sport specialist (bachelor, master, postgraduate) training and retraining system with a wide range of advanced training options; sports training systems in many disciplines; sport event hosting and management service; fitness clubs and wellness centers; digital-information-technolo-

gies-assisted research, theory and practice; modern computerized physical fitness and functionality tests systems applicable in the professional and amateur sports/ physical education; physical progress and heath monitoring systems for physical education and sports services; mental health (psycho-diagnostics) test systems using modern digital information technologies; initiatives to establish synergized education environments at universities, sports organizations, wellness centers and in the sector management system on the whole using modern digital information technologies [1,5, 8].

The educational digital transformation may be referred to in a narrow or broad sense. The narrow approach would consider digital transformation as limited by the education-specific needs including new service goals, contents, methods and tools, plus new institutional forms to facilitate an individual progress by customizable services offered by the modern e-learning resources. And the broad approach would consider digital transformation in the above aspects plus the education service design and management context to ensure high quality specialist education standards. These mean the teaching workload management, educational process scheduling, student's portfolio forming, e-learning service accessibility – including the electronic library system (EBS) accessibility – and other relevant service standards.

The educational digital transformation requires, above all, modern e-learning resources being widely applied in the academic education system supported by the new-generation didactic materials including digital multimedia curricula and progress test systems; digital multimedia multipurpose training systems; digital multimedia presentation toolkits primarily used to built up the knowledgebase; e-learning databases; educational resources formatted for uploading in the Internet; online/ distant education courses; digital e-learning videos and video tutorials; mobile e-learning applications, etc. [1-4].

As provided by I.V. Robert [9], "Digital information technologies gives the means to: reform the learning material presentation system using hypertexts and hypermedia formats; revise the communication paradigm in the educational process (teaching, learning and interactive information resource); introduce an automated progress test and education service management systems; and offer a wide range of e-learning resources".

Of special interest in this context are the e-learning resources design and management issues in some specific training sectors on the whole and their practical applications in the physical education-and-sport specialist trainings system for the professional services quality in particular. As far as the other physical education and-sports-specific digital transformation application fields are concerned, we would mention, first of all, the key physical education and sport service fields including the sports training, competitive event hosting and management, physical education / wellness services, etc. These physical education and sport service fields are open for the modern theoretical and practical training software tools and equipment including the trainees' progress and health testing and monitoring systems – both the laboratory and portable/ field ones. These systems have proved beneficial as they greatly facilitate the service management standards on the whole and the competitive event management service in particular – due to the objective performance tracking, analyzing and scoring systems among other things [1].

Increasingly promising in these physical education and sports service domains are the modern smart sensors, with the test data processed by the relevant mobile applications to produce a wide range of health/ fitness/ performance test indices (Strava, NTC, Watch, 8fit, Runtastic, etc.). Of special interest and potential benefits among them, as we believe, is the multifunctional DexBee application. A special priority will be given today to a central digital transformation advancement system that should help implement digital transformation in the physical education and sport sector on the whole and in every region and by every corporate physical education and sport service provider in particular [6,8].

Conclusion. Our analysis of the relevant theoretical and practical study reports and practical digital transformation implementation experiences in the national physical education and sport sector showed the physical education and sport specialist education, retraining and advanced training service being one of the most promising digital transformation progress trends. In this context, a special priority in the physical education-and-sport-specific digital transformation development projects will be given to the advanced training of the academic faculties to help them establish and use modern e-learning resources, develop knowledge and skills

in a variety of modern online and mixed education service formats, and keep abreast with the modern physical education-and-sports-education-specific digital transformation progress trends to ensure high quality of their students' professional service in future.

References

1. Petrov P.K. Information technologies in physical culture and sports. Teaching aid. Saratov: Vuzovskoe obrazovanie publ., 2020. 377 p. ISBN 978-5-4487-0737-7. Electronic library system IPR BOOKS: [site]. Available at: http://www.iprbookshop.ru/98504.html (Date of access: 20.08.2020).
2. Petrov P.K., Mikheev A.V. Mobile application for 4-10aikido test. Trends in development of higher education in the modern world. Proceedings International research-practical conference, Sochi, 2019. pp. 42-47.
3. Petrov P.K. Online training courses: application experience in sport specialist training disciplines. Teoriya i praktika fiz. kultury. 2018. No.12. pp. 12-14.
4. Petrov P.K., Akhmedzyanov E.R. Modern digital educational technologies in implementation of Sports Judge professional standard. Fizicheskaya kultura. Sport. Turizm. Dvigatelnaya rekreatsiya. 2020. V.5. no. 1. pp. 58-67.
5. Petrov P.K. Digital information technologies as new stage in development of physical education and physical education and sport sector. Sovremennye problemy nauki i obrazovaniya. 2020. No. 3. Available at: http://www.science-education.ru/ru/article/view?id=29916 (date of access: 20.09.2020).
6. Rapoport L.A., Tomilova S.V., Engin Yu.V. Digitalization of physical culture and sports sector at regional level. Teoriya i praktika fiz. kultury. 2020. No. 5. pp. 9-11.
7. Robert I.V. Development of pedagogical conceptual framework: digital information technologies of education. Pedagogicheskaya informatika. 2019. No.1. pp.108-12.
8. Strategy for development of physical education and sports in the Russian Federation for the period up to 2030: Order of the Government of the Russian Federation dated November 24, 2020. No. 3081-r. Available at: https://www.garant.ru/products/ipo/prime/doc/74866492/.