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EVALUATION OF EFFICIENCY OF ONLINE EDUCATION IN SPHERE OF PHYSICAL EDUCATION OF COLLEGE LEVEL STUDENTS DURING THE COVID-19 QUARANTINE IN UKRAINE

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The unexpectedly rapid transition to online education in the 2nd semester of 2020 due to the COVID-19 outbreak became a challenge for the domestic educators in Physical Education. Despite the abundance of newest health-tracking and sports devices, apps, and online platforms and channels, appropriate sport facilities and equipment are still necessary due to safety restrictions and for conduction of good quality PE and sports classes. Ukrainian climate conditions do not allow a year-round outdoor training in the public premises. Lack of sports equipment in private apartments, insufficient supply of Ukrainian families with computers and telephones of the new generation, lack of Internet access in 35% of families, inability to use sports facilities even for teachers for shooting video lessons, etc. resulted in a drop in the success of university students of PE departments. The failure of half-a-year PE classes' results on the state level was eloquently pronounced with the Ministry of Education official recommending assessment of students' year PE results by the I-st semester grades. Thus, the need to analyze the efficiency of online-teaching experience in domestic physical education arose. The article analyses the pitfalls of the introduction of distance education in the field of physical education of students of Ukrainian universities according to the criteria of effectiveness proposed by A. Veremchuk (effectiveness, accessibility to all segments of the population, resource intensity, efficiency, democratic communication "teacher-student", and comprehensive software technologies) and recommendations for compensation of the mentioned problem.

Key words: *Online education, physical education of university students, efficiency criteria, professional recommendations on the solution of problems.*

Statement of the problem in general and its connection with important scientific and practical tasks. In terms of changing the global paradigm of education in general and the role of higher education in this process

(digitalization, standardization by adhering to the international standards, blending of colleges and universities into very large structures, MOOC-education / massive open online courses like EdX, Coursera.org, or specifically Ukrainian educational platforms like Prometheus, Action (Dija), and etc.) every specialist in the field of education faces the task of understanding the direction of change of their own discipline, analysis of new opportunities and difficulties of transition to the newest learning technologies.

The field of physical culture is undergoing tremendous changes – personalization of training with real-time health-tracking using mobile applications, smart watches, and other monitoring devices that not only act as a personal trainer. The devices and apps help planning daily physical activity based on personal physical condition of the device or an app user, monitoring heart rate and calories burned, integrating a dietitian's advice, a doctor and a trainer, and also scanning and informing the users about people who train around them or very far away (basically, anywhere in the world – it depends on the setting of your preferences), with possibilities of connecting into live-regime group video-chats by your chosen sports activity, with comparison of individual achievements with those practicing around you, opportunities and reminders of the individual training plans and choices of music according to your taste, recommending the appropriate rhythm for your personal health conditions and training goals, selecting of videos with the best instructors in the field and desired training techniques, and etc.

Despite all these really tremendous and first-time-in-human-history achievements, distance education has become a real challenge for physical education professionals around the world. In Ukraine, especially in regions with relatively lower standard of living (these are most of Ukrainian cities, towns, and villages except for 2-3 major ones), the transition appears complicated. All mentioned above requires a thorough thinking, deep analysis, professional discussions, strategizing and planning, and support at the state level.

The research topic is an integral part of the comprehensive program of research work of the Department of Methods of Teaching Sports and Pedagogical Disciplines of Donbas State Pedagogical University in the structure of the state program "Physical Education - Health of the Nation" (paragraph 36 of the targeted comprehensive program), and the Consolidated Research Plan "Optimization of training future teachers of physical culture" of Physical Culture and Sport Department for 2019-2020.

Analysis of recent research and publications which initiated the solution of this problem and on which the author relies. The abrupt transition to online education and quarantine regime was fruitful on publishing of a large number of articles and conducting of numerous webinars on planning and

conducting online classes by domestic PE professionals. The most successful projects are offered by the above-mentioned state project Prometheus.org.ua, which offers a free course "New Physical Culture" for professionals and parents from prominent Ukrainian athletes and lecturers (Prometheus, 2020), online platforms such as naurok.com.ua, <https://vseosvita.ua>, Sports for Development (Innovative Physical Education Lessons) (Official Channel, 2020), a pan-Ukrainian Project JuniorZ (Pedan, 2020), Video Lessons for Schoolchildren (Mincifra, 2020), Digital Physical Education for Schoolchildren with Sports Stars (Dija, 2020), Physical culture on the quarantine (useful tips) (Kopylova, 2020), and etc. Also, most of schools and state universities reacted pretty quickly and offered teaching programs for online learning.

However, we did not find many scientific publications on the results and analysis of the introduction of distance education in the field of physical education other than private and collective video reports of physical education teachers for parents on school websites.

Such state of research of the problem can be explained by several factors: the urgency of change, the expectation of a return to normal learning and the perception of transition to distance education by colleagues in the field of physical education as a situational change. The problem of low effectiveness of distance education in the field of physical education requires careful and attentive analysis and intervention of specialists and civil authorities – the very fact of assessment of physical education of secondary school students on the recommendation of Acting Minister of Education Lubomyra Mandziy (Osvita.ua, 2020) by the results of the students' achievements during the first semester (when training was conducted in the usual mode) indicates the presence and the scale of the problem.

Highlighting previously unsolved parts of the general problem to which this article is devoted. To analyze the current status of the mentioned problem, we need to find criteria against which we can analyze the results of the organization of physical education in distant mode in Ukrainian universities and to do the actual efficiency analysis job, offering possible ways to solve the discovered problems.

Objectives of the article (task statement): to find criteria for analysis of efficiency of conducting physical education classes remotely in the colleges and universities of Ukraine.

The purpose of the article is to analyze the results of organization of online physical education in Ukrainian colleges, highlighting urgent problems in this area and offering possible solutions.

Presentation of the main material of the study with a full justification of the results. During the second semester of 2020, there was a sudden

transition to distance learning. By our own observations done at the Methods of Teaching Sports and Pedagogical Disciplines Department of Donbas State Pedagogical University and according to the statistical analysis of the results of PE students' grades in swimming and musical-rhythmic exercises disciplines, the failure of the mentioned results after just 2nd semester being conducted online (a general decline on 4.1% in the level of knowledge and skills) compared to the 5 previous years (2014-2019) of students' achievements in the same courses made us wonder if this was only a local, or the state-wide phenomenon. We assumed the mentioned decline was the direct consequence of the transition to online learning. It should be noted that the first semester of 2019-2020 students studied full-time and received the appropriate amount of practical training, so if we proceed with online education in PE courses, the drop in students' results may even accelerate.

There are not many Ukrainian authors who offered criteria of efficiency of education transition, and they mainly focus on the quality of assessment of e-learning content or based the overall efficiency assessment on students' rating.

We chose the criteria of effectiveness of distance education proposed by A. Veremchuk in 2013 when our state just began to develop the legislation on online education (performance effectiveness, accessibility to all segments of the population, resource use intensity efficiency, democratic communication "teacher-student", comprehensive software usage, and leading educational technologies) (Veremchuk, 2013).

We can claim that for the past 7 years Ukrainian colleges' PE departments have not been properly prepared by the state for the transition to online education either in the field of legislation (to sign appropriate contracts with university students requiring them to have computers, new phones, or apps), or in the sphere of finance and technology – there were no large-scale trainings for university teachers, so we had to react to the emergency situation completely unprepared.

In terms of performance effectiveness, we have already provided our own data on the drop of university students' results in PE courses in just six months of online learning. The state-wide results are not available because of the mentioned guidance by Acting Minister of Education L. Mandziy to omit the results of the II semester countrywide and to grade students by their achievements during the I semester of 2020. But the very fact of such recommendation speaks for itself.

In terms of accessibility to all segments of the population, the research done by a Factum Group cited in the article "Dependence on humanity. The way schools handle the quarantine and online education" (Ivantsiv, 2020) provides statistics of why "online-education is not for everyone": as for the third quarter

of 2019, only 65% of Ukrainians had Internet access from home, many families have only one PC to be used by working parents for their jobs online and by children to study. According to this resource, students and parents reported they lost the skills of social interaction during the quarantine which are also the task of the educational process of secondary schools and universities in Ukraine. In addition to the computers and phones that can technically support latest editions of Zoom, or Viber, or Skype, in the sphere of PE in order to master practical skills for sports courses, professional sports equipment is required, and also most of PE activities require specially organized environment for physical activity which, of course, is absent in private apartments and houses most of Ukrainians live and had to abide at during the quarantine. Actually, even by the contract and law, it is a Universities' job to provide those special facilities and equipment to the students as a part of a contract for the provision of educational services. Besides, students of PE departments must not only learn to use sports equipment themselves and pass certain standardized practical exams on those, but also have experience of pedagogical contact with high school students and training them to use sports equipment during pedagogical practice.

In terms of resource input (reducing the state expenses on maintaining educational facilities – because students and teachers don't need to attend lectures, workshops, or seminars; on costs of equipment or other material resources such as sports, computer, or lab equipment, auditoriums and gyms, coaches, and etc.) it is important to mention that holding PE classes in educational institutions is cheaper than organizing special multiple public premises around the city because in the conditions of Ukrainian climate (3 cold seasons out of 4), they should be indoor facilities, and the mentioned equipment is too spacious and expensive to be purchased individually by every student. So Ukraine should face either preparing non-professional PE teachers, or invest into its colleges.

In terms of investment into human capital (professional teachers' time to prepare big number of students with guaranteed transition of correct practical skills) PE classes are better to facilitate in groups where the teacher observes exercises' techniques and immediately corrects errors of some students in a group, and other students hear and see and correct their own mistakes at the same time. First, in the area of physical training it is much more difficult to correct movement mistakes when they are incorrectly learned already because motor memory' of human bodies is handled in our brains by other laws than linguistic or symbolic activity. It is important to learn movements correctly from the beginning. Secondly, training in specially equipped sports facilities is a safety requirement for many sports. Thirdly, it saves the time of the specialist, because watching videos of students' own trainings and then commenting on the

technique of each student separately and then watching new videos with corrected techniques and commenting again takes a lot of teachers' time – besides, in a university with a large number of students, the teacher will not be able to do it physically because working hours and teaching load are limited by the law.

By the criterion of democratic communication mode "teacher-student", online education does not significantly alter the interaction strategies of PE teachers sports coaches with students because there is always a hierarchy with an expert acting as a more experienced coach that a trainer has to maintain when teaching exercise techniques and standards. Democratic approach might cost a life-long trauma in sports.

In terms of availability of professional hardware, software, and other digital equipment in physical education, under the circumstances of the quarantine teachers had to urgently look for any appropriate training sites in winter and record own training classes video at the time when schools and even outdoor sports facilities were closed, so the videos came unprofessional because teachers' homes did not have proper equipment or professional space. For example, most if not all of Ukrainian swimming instructors do not have their own pools at home to demonstrate swimming techniques properly. In addition, teachers did not have the opportunity to use professional cameras and microphones to record video at the appropriate level because the state did not provide every teacher, as well as even most of universities departments with the digital equipment.

In terms of the usage of newest achievements of educational resources and technology, as noted above, PE classes require not only novel and expensive personally carried devices, but specially equipped sports facilities.

Thus, according to all of the criteria of the effectiveness of online education, its application in the educational process in sports and pedagogical disciplines was impractical at this stage of the state of readiness of Ukrainian universities and other higher education institutions.

Conclusions and prospects for further research. One of the strategies that will enable Ukraine to address the issues of physical education is raising the prestige of science and our integration into the world educational space through the introduction of common educational standards with developed countries (Globa, 2019). However, in addition to standards, Ukraine must also provide opportunities to use global assets to its own citizens – economically (funding colleges, creation of digital hubs, development of 4 G, 5 G-coverage, ensuring the level of salaries for own citizens to purchase the necessary digital equipment), legislation (development and implementation of appropriate laws in the sphere of digital education, copyright, etc.), and at the level of educational

services (teach IT skills from primary school as for example it has been done in Estonia and the Nordic countries).

Opportunities and scientifically substantiated proportions of hybrid education (combination of the best aspects of online and offline forms of education) in the field of physical education are the prospects of our further research.

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ОЦІНКА ЕФЕКТИВНОСТІ ОНЛАЙН-ОСВІТИ В СФЕРІ ФІЗИЧНОГО ВИХОВАННЯ СТУДЕНТІВ ВНЗ ПІД ЧАС COVID-19 КАРАНТИНУ В УКРАЇНІ

Г. В. Глоба

Несподівано швидкий перехід до онлайн-освіти у II семестрі 2020 року через спалах COVID-19 став викликом для вітчизняних викладачів з фізичного виховання. Незважаючи на велику кількість новітніх оздоровчих та спортивних пристроїв, додатків, онлайн-платформ та каналів, відповідні спортивні споруди та обладнання все ще необхідні через вимоги правил безпеки та задля проведення якісних занять з фізкультури та спорту. Відсутність спортивного обладнання в приватних квартирах, недостатня забезпеченість українських сімей

комп'ютерами та телефонами нового покоління, відсутність доступу до інтернету у 35% сімей, неможливість користуватися спортивними спорудами навіть для вчителів для зйомки відео-уроків тощо зумовило падіння успішності студентів факультетів фізичного виховання під час карантину, що на державному рівні красномовно виражено рекомендацією в.о. міністра освіти оцінювати результати учнів з фізкультури за оцінками в I семестрі. Таким чином, виникла необхідність аналізу ефективності досвіду онлайн-викладання у вітчизняному фізичному вихованні.

У статті проаналізовано проблемні аспекти впровадження дистанційної освіти у галузі фізичної культури студентів українських університетів відповідно до критеріїв ефективності, запропонованих А.Веремчук (результативність, доступність усім верствам населення, ресурсомісткість, оперативність, демократичний зв'язок «викладач-студент», комплексне програмне забезпечення, провідні освітні технології) та запропоновано рекомендації щодо компенсації означених проблем: державне планування та підтримка (економічна, законодавча та на рівні освітніх послуг).

Ключові слова: онлайн-освіта, фізичне виховання студентів ВНЗ, критерії ефективності, професійні рекомендації щодо вирішення проблем.

ОЦЕНКА ЭФФЕКТИВНОСТИ ОНЛАЙН-ОБРАЗОВАНИЯ В СФЕРЕ ФИЗИЧЕСКОГО ВОСПИТАНИЯ СТУДЕНТОВ ВУЗОВ ВО ВРЕМЯ COVID-19 КАРАНТИНА В УКРАИНЕ

Г. В. Глоба

Неожиданно быстрый переход к онлайн-образованию во II семестре 2020 года из-за вспышки COVID-19 стал вызовом для отечественных преподавателей по физическому воспитанию. Несмотря на большое количество новейших оздоровительных и спортивных устройств, приложений, онлайн-платформ и каналов, соответствующие спортивные сооружения и оборудование все еще необходимы из-за требований правил безопасности и для проведения качественных занятий по физкультуре и спорту. Отсутствие спортивного оборудования в частных квартирах, недостаточная обеспеченность украинских семей компьютерами и телефонами нового поколения, отсутствие доступа к интернету в 35% семей, невозможность пользоваться спортивными сооружениями даже учителям для съемки видео-уроков и т.д. обусловило падение успеваемости студентов факультетов физического воспитания во время карантина. Это на государственном уровне красноречиво выражено рекомендацией и.о. министра образования оценивать результаты учеников по физкультуре по оценкам, полученным в первом семестре.

В статье проанализированы проблемные аспекты внедрения дистанционного образования в области физической культуры студентов украинских вузов в соответствии с критериями эффективности, предложенными А. Веремчук (результативность, доступность всем слоям населения,

ресурсоемкость, оперативность, демократическая связь «преподаватель-студент», комплексное программное обеспечение, ведущие образовательные технологии) и предложены рекомендации по компенсации указанных проблем: государственное планирование и поддержка (экономическая, законодательная и на уровне образовательных услуг).

Ключевые слова: *онлайн-образование, физическое воспитание студентов вузов, критерии эффективности, профессиональные рекомендации по решению проблем.*

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