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## DISTANCE LEARNING IN THE TRAINING OF SPORTS SPECIALISTS IN THE CONTEXT OF EUROPEAN INTEGRATION

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DOI <https://doi.org/10.30525/978-9934-26-557-0-19>

### INTRODUCTION

Distance learning in the training of professionals in the field of sports is essential because it allows students to combine their studies with work, training or other commitments; With digital platforms, students have access to a huge amount of educational materials, webinars, lectures, articles, and research from anywhere in the world; students can independently manage the pace and learning environment, allowing them to focus on their needs and interests; Students develop important digital skills that are relevant in today's world. Distance learning is often more economical because it reduces the cost of transportation, accommodation, and other costs associated with traditional learning.

Modern challenges related to the spread of the coronavirus disease COVID-19 have significantly influenced the intensification of the process of using mixed (full-time-distance) and distance learning in the educational sphere in Ukraine<sup>1</sup>, since the beginning of the war and the introduction of martial law<sup>2</sup>, 80% of higher education institutions are operating online or in a mixed mode until now<sup>3,4</sup>. Analytical data for the 2020/2021 academic year indicate a loyal attitude of participants in the educational process (65%) to work in the existing conditions.

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<sup>1</sup> Про організаційні заходи для запобігання поширення коронавірусу COVID-19. Наказ МОН № 406 від 16.03.2020 року. Міністерство освіти і науки України. 2020. URL: <https://mon.gov.ua/ua/npa/pro-organizacijni-zahodi-dlya-zapobigannya-poshirennyu-koronavirusu-s-ovid-19>

<sup>2</sup> Закон України «Про правовий режим воєнного стану» / Верховна Рада України. 2022. URL: <https://ips.ligazakon.net/document/T150389?an=36>

<sup>3</sup> Про деякі питання організації роботи закладів фахової передвищої, вищої освіти на час воєнного стану. Наказ МОН № 235 від 07.03.2022 року. Освіта UA. 2022. URL: [https://osvita.ua/legislation/Vishya\\_osvita/85884/](https://osvita.ua/legislation/Vishya_osvita/85884/)

<sup>4</sup> Аналітична довідка щодо стану задоволеності педагогічних, науково-педагогічних працівників та здобувачів освіти закладів фахової освіти організацією освітнього процесу на початку 2022/2023 навчального року. DSIaO. 2023. URL: [https://sqe.gov.ua/wpcontent/uploads/2022/10/Pochatok\\_2022/2023\\_navchalnogo\\_roku\\_IAD\\_VO\\_FPO\\_SQE.pdf](https://sqe.gov.ua/wpcontent/uploads/2022/10/Pochatok_2022/2023_navchalnogo_roku_IAD_VO_FPO_SQE.pdf)

The results of the calculation of the consumer satisfaction index of educational services indicate a gradual settlement of the problems caused by the transition to distance learning and a significant increase in the level of satisfaction with the organization of education during the academic year<sup>5</sup>.

At the beginning of the 2022/2023 academic year, 85% of participants in the educational process reacted positively to the organization of the educational process in an online format in their higher education institutions, highly appreciating the quality of educational services and the learning outcomes of applicants. The level of satisfaction of consumers of educational services has increased significantly (by 4-6 points) compared to the last academic year<sup>6</sup>.

The study of world experience indicates a high level of perception of distance learning in leading foreign universities (93%) and its increased use in the educational process (87%)<sup>7</sup>. This positive attitude towards distance learning is explained by the wide range of opportunities that open up for students, increasing their mobility, providing access to education around the world, ensuring lifelong learning continuity<sup>4</sup>.

## **1. Organization of distance learning in the training of future specialists in the field of sports**

In world practice, distance learning is quite common. In many countries of the world, its popularity is growing every year, because this form of education, the main principle of which is interactive interaction between subjects of educational services, is the most flexible and accessible<sup>8</sup>.

The concept of "distance learning" is interpreted as "an individualized process of acquiring knowledge, skills, skills and ways of cognitive activity of a person, which occurs mainly through indirect interaction of participants in the educational process remote from each other in a specialized

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<sup>5</sup> Аналітична довідка щодо стану задоволеності педагогічних, науково-педагогічних працівників та здобувачів освіти закладів фахової освіти організацією освітнього процесу на початку 2021/2022 навчального року. DSlaO. 2021. URL: [https://sqe.gov.ua/wpcontent/uploads/2021/05/ANALITICHNA\\_DOVIDKA\\_Opituвання\\_FPO\\_ZVO\\_DSYAO\\_05.2021.pdf](https://sqe.gov.ua/wpcontent/uploads/2021/05/ANALITICHNA_DOVIDKA_Opituвання_FPO_ZVO_DSYAO_05.2021.pdf)

<sup>6</sup> Аналітична довідка щодо стану задоволеності педагогічних, науково-педагогічних працівників та здобувачів освіти закладів фахової освіти організацією освітнього процесу на початку 2022/2023 навчального року. DSlaO. 2023. URL: [https://sqe.gov.ua/wpcontent/uploads/2022/10/Pochatok\\_2022/2023\\_navchalnogo\\_roku\\_IAD\\_VO\\_FPO\\_SQE.pdf](https://sqe.gov.ua/wpcontent/uploads/2022/10/Pochatok_2022/2023_navchalnogo_roku_IAD_VO_FPO_SQE.pdf)

<sup>7</sup> Кучик О., Дем'янчук А. Сучасні технології дистанційного навчання. Гуманітарні студії: історія та педагогіка. 2022. (2), 77–85. URL: <http://gsip.wunu.edu.ua/index.php/gsipua/article/view/52>

<sup>8</sup> López-Carril, S., Villamón, M. & González-Serrano, M.H. Linked(In)g Sport Management Education with the Sport Industry: A Preliminary Study. Sustainability. 2021. 13 (4), 2275. <https://doi.org/10.3390/su13042275>

environment that functions on the basis of modern psychological, pedagogical, information and communication technologies"<sup>9</sup>.

Scientific and pedagogical staff of the Kharkiv State Academy of Physical Culture and students have had experience of distance learning during the COVID-19 pandemic since March 2020, most students (76%) liked to study remotely, since teachers used modern technologies for teaching lectures and seminars using services with the support of video conferencing "Zoom", "Google Meet", provided educational and methodological materials in electronic form with round-the-clock access on the Google Classroom platform and in the distance learning system of the Kharkiv State Academy of Physical Culture "Moodle", which made it possible to effectively process the material of academic disciplines and pass online testing for control. Communication with teachers in messengers ("Telegram", "Viber", "WhatsApp", etc.) and the creation of communities of academic groups, departments, faculties facilitated the establishment of communication between students and teachers<sup>10</sup>.

A survey of students conducted after the resumption of the educational process under martial law revealed that the most important advantages of online learning for them are an individual approach to learning, flexibility of the schedule with the ability to choose convenient conditions (place and time), as well as the ability to study theoretical material on various online platforms. In their opinion, the lack of the necessary technical means at home and unstable access to the Internet negatively affect the organization of effective distance learning.

More than 70% of students were able to start classes. Teachers of the Academy, when studying under martial law, use all methods of conducting classes in a remote synchronous format, in particular videoconferencing, when there are appropriate conditions; asynchronous format – on the Moodle platform, where methodological materials on disciplines are posted that applicants can use on their own. All teachers created chats for communicating with applicants (and groups in academic disciplines) in Viber and/or Telegram messengers<sup>11</sup>.

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<sup>9</sup> Положення про дистанційне навчання. Міністерство освіти і науки Україниrainy. 2013. URL: <https://zakon.rada.gov.ua/laws/show/z0703-13#Text>

<sup>10</sup> Бондар А. С. Особливості підготовки майбутніх спортивних менеджерів в умовах воєнного стану в Україні. Освітній процес в умовах воєнного стану в Україні : матеріали всеукраїнського науково-педагогічного підвищення кваліфікації, 3 травня – 13 червня 2022 року. Одеса : Видавничий дім «Гельветика». 2022. С. 38-41. URL: [https://enpuir.npu.edu.ua/bitstream/handle/123456789/37782/Petko\\_2022.pdf?sequence=1](https://enpuir.npu.edu.ua/bitstream/handle/123456789/37782/Petko_2022.pdf?sequence=1)

<sup>11</sup> Бондар А. С. Особливості підготовки майбутніх спортивних менеджерів в умовах воєнного стану в Україні. Освітній процес в умовах воєнного стану в Україні : матеріали всеукраїнського науково-педагогічного підвищення кваліфікації, 3 травня – 13 червня 2022 року. Одеса : Видавничий дім «Гельветика». 2022. С. 38-41. URL: [https://enpuir.npu.edu.ua/bitstream/handle/123456789/37782/Petko\\_2022.pdf?sequence=1](https://enpuir.npu.edu.ua/bitstream/handle/123456789/37782/Petko_2022.pdf?sequence=1)

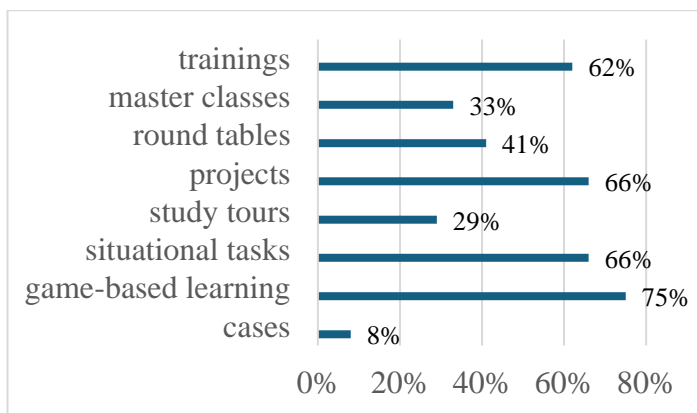
The main measures taken by the scientific and pedagogical staff of the Academy to attract students of higher education to attend classes are:

- personal communication with each applicant for the specialty (telephone conversations, correspondence in messengers and via e-mail);
- interaction with the heads of academic groups;
- creation of chats on disciplines in Viber and/or Telegram;
- communication of teachers with deans, their deputies and methodologists of dean's offices;
- individual counseling for students who, for technical or other reasons, cannot attend classes online<sup>12</sup>.

Monitoring of the quality of educational results revealed that the average score of students of Kharkiv State Academy of Physical Culture at the end of the academic year was 79 points. Compared to the previous session, where the average score was 66 points, it can be seen that the results have improved significantly, which indicates the effective organization of the educational process.

To analyze the quality of education, an annual survey was conducted among students, which showed that 100% of respondents are satisfied with the methods of teaching and teaching and believe that teachers use the results of modern scientific research when choosing their methods.

Among the interactive methods that were most often used during training under the chosen educational program, respondents' opinions were distributed as follows: situational tasks, project preparation, game learning, trainings, round tables, master classes, educational excursions and cases.

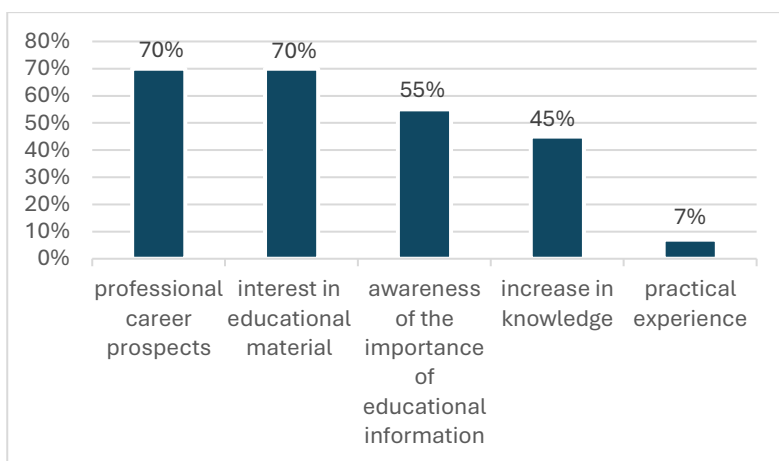


**Fig. 1. Interactive methods used by teachers**

<sup>12</sup> Bondar A., Kovalenko J., Petrenko I. Ensuring the education quality of future sports managers under martial law. Scientific journal National Pedagogical Dragomanov University. 2023. 5(164)23, 9-13. [https://doi.org/10.31392/NPU-nc.series15.2023.5\(164\).01](https://doi.org/10.31392/NPU-nc.series15.2023.5(164).01)

76.5% of the surveyed students are completely satisfied with the competencies acquired during practical training under the educational and professional program. 82% believe that the amount of educational material offered during classroom classes is sufficient and they have enough time to assimilate it and perform independent tasks. 93% of respondents expressed positive impressions, while 6% noted that they were not satisfied with the need to search for a large amount of information on their own.

Motivate students to independent educational and scientific-professional work – prospects for professional activity (70%), interest in educational material (70%), awareness of the importance of educational information (55%), increase in the amount of knowledge (45%). Respondents also have practical experience in the category of other factors (7%).



**Fig. 2. Factors that motivate students to independent and scientific-professional activities**

All surveyed students are satisfied with the socio-psychological climate in the staff of their student groups and 41% of respondents attended the events of the Department of Psychological Support of the Educational Process at the Academy.

The most significant components of the quality of the organization of education, applicants for higher education are: obtaining non-formal education (65%), the possibility of growth as a future scientific and pedagogical worker (59%), international mobility (53%).

A comparative analysis of the assessment of the components of the quality of training for sports managers in the 2021/2022 and 2023/2024 academic years showed that the attitude of students to receiving non-formal education has changed, during martial law this figure increased to 65%, compared to

the 2020/2021 academic year, this figure increased by 32%, this may indicate the effective mastery of online learning skills and the increase in the number of educational services on the Internet. The indicator of international mobility of the educational process has increased, according to future sports managers, this may be due to the departure of many students abroad and the search for opportunities to obtain educational qualifications in higher education institutions of the European Union. At a sufficiently high level, there is an indicator of the possibility of growth as a future scientific and pedagogical worker, which indicates a conscious approach to the choice of a future profession and the acquisition of appropriate educational competencies.

## **2. Development of soft skills in future specialists in the field of sports in the process of distance learning**

Distance learning creates conditions for the intensive development of not only professional knowledge, but also additional competencies that are important for successful professional activity in the field of sports. Mastering additional competencies related to computer skills, information analysis, working with social media will contribute to the successful implementation of the experiential learning methodology, and become a driving force in the development of students' careers through the use of tools such as, for example, Facebook, Twitter, Instagram, LinkedIn, which contain information related to the sports industry. These tools can be useful pedagogical resources for developing course content and fostering contact between teachers and students, creating a sustainable online learning environment, facilitating the quality, continuity and accessibility of learning<sup>13</sup>.

A survey of students conducted in March 2022, after the resumption of the educational process under martial law, showed that they consider the individualization of learning, flexibility of the study schedule in choosing the most convenient conditions (place and time), and the processing of theoretical material on various online platforms to be the most significant opportunities for online learning. In their opinion, the lack of the necessary equipment at home and the lack of constant access to the Internet negatively affect the organization of full-fledged distance learning.

More than 70% of students were able to start classes<sup>14</sup>. Thanks to the organization of the educational process in a distance format, students have

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<sup>13</sup> López-Carril, S., Villamón, M. & González-Serrano, M.H. Linked(In)g Sport Management Education with the Sport Industry: A Preliminary Study. *Sustainability*. 2021. 13 (4), 2275. <https://doi.org/10.3390/su13042275>

<sup>14</sup> Бондар А. С. Особливості підготовки майбутніх спортивних менеджерів в умовах воєнного стану в Україні. Освітній процес в умовах воєнного стану в Україні : матеріали всеукраїнського науково-педагогічного підвищення кваліфікації, 3 травня – 13 червня 2022 року. Одеса : Видавничий дім «Гельветика». 2022. С. 38-41. URL: [https://enpuir.npu.edu.ua/bitstream/handle/123456789/37782/Petko\\_2022.pdf?sequence=1](https://enpuir.npu.edu.ua/bitstream/handle/123456789/37782/Petko_2022.pdf?sequence=1)

the opportunity to choose a convenient time for studying, which allowed Kharkiv State Academy of Physical Culture higher education students to continue their studies while abroad in different countries of the world (22.5%), the rest (77.5%) of applicants undergo online training while in Ukraine.

Today, significant changes have taken place in sports and educational institutions in which specialists in the sports field are trained. Special attention should be paid to the content of educational and professional programs for the training of future specialists in the sports industry and their acquisition of additional competencies that are necessary to solve complex problems associated with risks, stressful situations, and the use of new technological resources. Students must understand the rules of engagement with new technologies and the realities of working in flexible, risky, and crisis environments<sup>15</sup>.

Among the main components that allow you to assess the professional competence of future specialists in the sports industry: motivational-value, moral-volitional, cognitive, gnostic and professional-personal components<sup>16</sup>. The profession of a sports specialist includes a whole set of competencies, knowledge, skills, skills related to the acquisition of these competencies are mandatory and they are "hard skills"<sup>17</sup>.

There are a number of competencies that are also necessary for a specialist in the sports field in future professional activities: complex problem solving, abstract thinking, critical thinking, self-development, sociability, responsiveness, creativity, flexibility in decision-making, determination, responsibility<sup>18</sup>, they are universal and do not play a decisive role in professional training, they can be attributed to "soft skills" – desirable, but not mandatory.

The education of the specialist in the sports field should be developed to increase self-employment through new pedagogical approaches that allow for the improvement of critical thinking through the incorporation of internships, new technologies and e-learning. In addition, the current social and economic

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<sup>15</sup> Sesinando, A.D., Seguí-Urbaneja, J., Teixeira, M.C. Professional development, skills, and competences in sports: a survey in the field of sport management among public managers. *Journal of Physical Education and Sport*. 2022. Vol. 22 (issue 11). Art 355, 2800-2809. <https://doi.org/10.7752/jpes.2022.11355>.

<sup>16</sup> Prystupa, Y., Kryshchanovych, S., Danylevych, M., Lapychak, I., Kryshchanovych, M., Sikorskyi, P., Podolyak, Z., Basarab, V. Features of formation the professional competence of future managers of physical culture and sports. *Journal of Physical Education and Sport*. 2020. Vol 20 (Supplement issue 1), 441 – 446. <https://doi.org/10.7752/jpes.2020.s1064>

<sup>17</sup> Dina A.M. Miragaia, Jorge A.P. Soares. Higher education in sport management: A systematic review of research topics and trends. *Jornal of hospitalsty, leisure, sport and tourism education*. 2017. 21. 101-116. <https://doi.org/10.1016/j.jhlste.2017.09.00>

<sup>18</sup> Singh, D. Sports management and curriculum design in physical education. New Delhi. 2021. 192 p. URL: <https://www.researchgate.net/publication/340442497>

dynamics present an opportunity to improve the quality of programs and orient them towards an approach to globalization and internationalization<sup>19</sup>.

The qualification characteristics of a specialist in the sports industry include such indicators as the ability to make decisions, the development of personal qualities, the presence of professional knowledge, the ability to establish interpersonal relationships<sup>20</sup>. That is why the professional training of a future specialist in the sports industry should be aimed at the formation of not only mandatory professional skills (hard skills), but also the mastery of additional flexible skills (soft skills) that contribute to personal and career growth<sup>21</sup>, серед них: відповідальність, комунікабельність, самоорганізація, креативність, емоційний інтелект, презентаційні навички тощо<sup>22</sup>. "Soft skills" are personal qualities that allow you to interact effectively and harmoniously with other people<sup>23</sup>.

Successful mastery of soft skills is facilitated, among other things, by distance learning, since this form of communication encourages participants in the educational process to use IT technologies, use interactive forms of learning, make non-standard creative decisions during classes and independently master the educational material<sup>24</sup>. During a survey of students studying in the specialty "Physical Culture and Sports" at the Kharkiv State Academy of Physical Culture, it turned out that most of them (85%) consider it necessary to develop creative and creative abilities during their studies, 10% of respondents are not ready to devote much time to it, and only 5% believe that they will not need such skills in the future. The majority of respondents (90%) want higher education institutions to conduct purposeful development of their creativity and creative abilities. In the professional activity of a specialist in the sports field, students consider justice (60.1%), sociability (48.7%), creativity and creativity (36.5%) to be the most important qualities. In addition, the majority of students believe that a sports specialist should take into account the creative ideas of his subordinates (73%).

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<sup>19</sup> Bondar A., Kovalenko J., Petrenko I. Ensuring the education quality of future sports managers under martial law. Scientific journal National Pedagogical Dragomanov University. 2023. 5(164)23, 9-13. [https://doi.org/10.31392/NPU-nc.series15.2023.5\(164\).01](https://doi.org/10.31392/NPU-nc.series15.2023.5(164).01)

<sup>20</sup> Çiftçia, S., Mirzeoğlu, N. The research of qualifications of sport manager. Procedia – Social and Behavioral Sciences. Volume. 2014. 152. 740 – 745.

<sup>21</sup> Муромець В. Топ-5 Soft skills для успішності в житті та кар'єрі. 2020. URL:[https://kubg.edu.ua/images/stories/podii/2017/02\\_17\\_konferenciya\\_molodizhna\\_nauka\\_v\\_u\\_kr/7\\_Top5\\_Soft\\_Skills.pdf](https://kubg.edu.ua/images/stories/podii/2017/02_17_konferenciya_molodizhna_nauka_v_u_kr/7_Top5_Soft_Skills.pdf)

<sup>22</sup> Kondur, O. et al. Soft skills formation of future athletes and physical education teachers. Journal of Vasyl Stefanyk Precarpathian National University. 2022. Vol. 9, No. 1, 27-36. <https://doi.org/10.15330/jpnu.9.1.27-36>

<sup>23</sup> Oxford English Dictionary. URL: <https://www.oed.com/>

<sup>24</sup> Кучик О., Дем'янчук А. Сучасні технології дистанційного навчання. Гуманітарні студії: історія та педагогіка. 2022. (2), 77–85. URL: <http://gsip.wunu.edu.ua/index.php/gsipua/article/view/52>



The analysis of the survey materials showed that the vast majority of respondents (70%) like seminars and practical classes, where there is interaction between all participants in the educational process, 20% prefer lectures where the teacher presents educational material and only 10% of respondents would like to study the material independently. This shows that most students are eager for communication and collaboration while studying.

Among the popular teaching methods, students noted a business game (40%), solving situational problems and cases (30%), trainings (20%), design and independent work on presentations and reports (10%). At the same time, 80% of respondents prefer teamwork in creative groups, 15% believe that they work equally well both alone and in a group, and only 5% want to work independently without a team.

The survey of students made it possible to find out that the main prerequisites for optimizing the professional training of future specialists in the sports field are the desire of students to acquire creative and creative abilities while studying at higher education institutions in classes using interactive pedagogical technologies.

The Program in the discipline "Organization and Management of Physical Culture" for 3rd and 4th year students, adapted for online distance learning, contributes to the development of creative and creative abilities, making non-standard decisions, finding an effective solution from among several possible ones, and includes the following topics: "Business Communication", "Intercultural Management", "Time Management", "HR Management", "Leadership and Team Building", "Strategic Management", "Business Planning in Sports Activities", "Event Management", "Sports Marketing", "Sports Branding".

During the development of the Program, it was taken into account that the promising forms of organization of training of future specialists in the sports industry are mixed innovative forms of training, which allow to move to a new level of training of personnel in physical education and sports. Among the effective methods, the use of which in the educational process makes it possible to form professional competencies, business games, case method, facilitation, trainings have been chosen<sup>25</sup>.

The implementation of the Program in the educational process took place through the use of technologies for the development of creative thinking and creative abilities of students (Table 1). 1.), such as:

- Interactive techniques – develop communication skills and activity (business games, associative games, etc.), the educational process takes place under conditions of constant, active interaction of all students.

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<sup>25</sup> Singh, D. Sports management and curriculum design in physical education. New Delhi. 2021. 192 p. URL: <https://www.researchgate.net/publication/340442497>

– Project technologies – provide an opportunity for independent experiments (projective games, independent tasks), this is an independent activity of the student, which the scientific and pedagogical worker plans together with the student.

– Trainings – contribute to the acquisition of new social roles and experimentation in communication (lectures and trainings), a method of active learning aimed at developing knowledge, skills and social attitudes.

– Educational activities – which contribute to the comprehensive harmonious development of the individual.

When developing the Program, it was taken into account that training takes place in a distance format, online.

Table 1

**Forms of organization of classes for the development of creativity and creative abilities**

<b>Name of the technique</b>	<b>Form</b>	<b>Content</b>
<b>Interactive Techniques</b>	Business games, creative tasks, modeling, solving group experimental tasks (facilitation), cases	They develop communication skills, creativity, activity, critical thinking. The educational process takes place under conditions of constant, active interaction of all participants in the educational process. This is co-learning, mutual learning (collective, group learning in cooperation)
<b>Project technologies</b>	Independent creative work, individual experimental work, problem solving, design	They reveal the possibility for independent experiments, independent activity of the student, under the guidance of a scientific and pedagogical worker without his direct intervention
<b>Trainings</b>	Seminars, webinars, debates, discussions, practical exercises	The method of active learning aimed at obtaining new information with a practical test of the acquired knowledge, skills and abilities contribute to the establishment of communication ties, practice in communication, the performance of new social roles.
<b>Educational activities</b>	Educational conversations, social projects, quizzes, quests	They help to choose the type of activity at their own discretion, show social activity and civic position

In order to determine the effectiveness of the developed Program, a survey of experts (20 people) was conducted. The overall expert assessment of the effect of the implementation of the program was 4.61 points (out of 5 points). Concordance coefficient ( $W$ ) indicators that characterize the overall content of the Program among experts amounted to 0.97, i.e. ( $W \geq W_{cp}$ ), which indicates the consistency of experts' opinions; Concordance coefficient ( $W$ ) in terms of the effect of the implementation of the Program among experts is 0.93, i.e. ( $W \geq W_{cp}$ ), which also indicates the consistency of experts' opinions.

The use of this Program is aimed at the formation of the student's personality, which is characterized by:

- inner freedom (here: situations of choice that stimulate cognitive interest, a sense of responsibility and self-importance);
- stability and stress resistance is the management of emotions (to feel the mood of others, to resist stress, to be able to overcome feelings of fear, shame);
- adequate self-esteem (it changes during student life).

The foundation for the training of a new generation of specialists in the sports field is scientific experience, and the advantage in everyday work is given to them by creativity of thinking and a creative approach to solving complex problems that require purposeful development, so students are actively involved in scientific conferences and seminars during their studies.

During the implementation of the Program in the educational process at the beginning and at the end of the experiment, the creative abilities of students of Kharkiv State Academy of Physical Culture (according to the method of Torrens), who at the beginning of the experiment studied in the 3rd year, at the end – in the 4th year, were tested, the test results are presented in Table 2 (experimental group) and Table 3 (control group). During the experiment, the control group studied according to the existing Program in the discipline "Organization and Management of Physical Culture" for 3rd and 4th year students, and the experimental group studied according to the Program in the discipline "Organization and Management of Physical Culture" for 3rd and 4th year students, adapted for online distance learning.

Table 2

**Results of testing the creative abilities of future specialists  
in the sports field of the experimental group  
(according to the Torrens method)**

Data groups		Lightness (speed)		<i>f</i> -meaning	Flexibility		<i>f</i> -meaning	Оригінальність		<i>f</i> -meaning	Розробленість		<i>f</i> -meaning
		September 2021	December 2022		September 2021	December 2022		September 2021	December 2022		September 2021	December 2022	
Control group													
Average		Dispersion		0,56	7,43	2,26	0,684	9,57	1,8	0,44	25,9	4,5	0,69
10		3,43			9,2	3,3		10,4	4,1		41,6	6,5	
Experimental group													
Average		Dispersion		0,129	6,02	1,89	2,74	8,75	0,82	5,018	25,6	1,23	0,41
10,6		3,43			8,6	0,69		12,05	4,11		41	3	

From the analysis of the test results presented in Table 2, it can be seen that students of both groups, as a result of training, significantly increased the indicators of the development of creative abilities, this applies to students of the control group who studied according to the existing curriculum during offline classes and applicants of the experimental group who studied according to the program adapted to distance learning online. Thus, in the control group, the indicators of lightness (speed) increased by 1.71 points,

flexibility of thinking – by 1.77 points, originality of thinking – by 0.83 points, development of ideas – by 15.7 points.

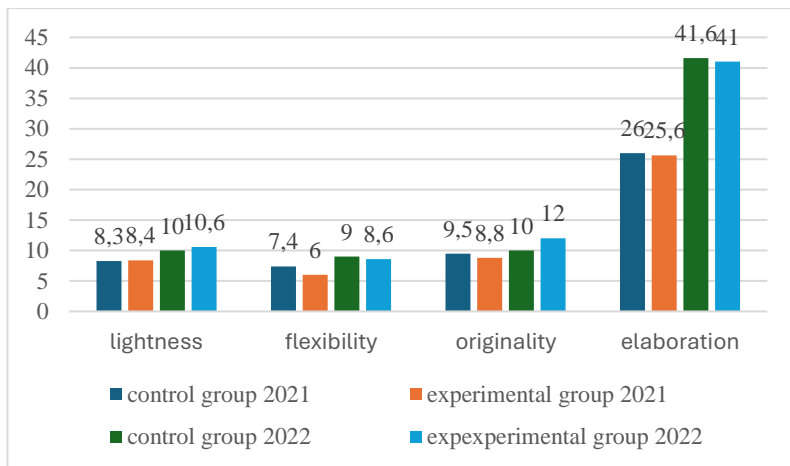
Obtained value of the Fisher criterion (f-значения) In the control group, all indicators of nonverbal creativity are less than 1.0, this shows that the relationship between the indicators at the beginning and end of the experiment is greater than the random change. Therefore, based on this result, we can conclude that the difference between the averages at the beginning and end of the experiment is statistically significant. This makes it possible to assert that in the control group, the ability to produce a large number of ideas (speed) significantly improved in the learning process; the ability to apply a variety of strategies in solving problems (flexibility); ability to produce unusual, non-standard ideas (originality); ability to develop ideas in detail (elaboration).

The students of the experimental group also changed significantly in the indicators of non-verbal creativity: ease (speed) – by 2.2 points, flexibility of thinking – by 2.58 points, originality of thinking – by 3.3 points, development of ideas – by 15.4 points.

According to the Fisher criterion, the average indicators of ease and development in the experimental group are less than 1.0, which shows that the difference between the mean values of both samples is statistically significant. In originality indicators, the value of the Fisher criterion is 5.018, which means that according to the Fisher-Snedecor critical values tables, there is a statistically significant difference between the originality indicators at the beginning and end of the experiment. The resulting coefficient indicates that the ratio of variances of the two test results is significantly higher than 1. The result obtained indicates that the average value of originality at the beginning and the average value at the end of the study are statistically significantly different from each other. Only the indicators of flexibility do not have a statistical difference, which is confirmed by the value of the Fisher criterion, which is 2.74 and greater than 1. The results of the study make it possible to say that all indicators of creativity have significantly improved among students studying online, except for flexibility, which characterizes the ability to put forward ideas and strategies, the ability to move from one aspect to another, sometimes a decrease in flexibility indicators may indicate low motivation. It should be noted that, despite the absence of a statistical difference in the growth of this indicator, it increased within the normal range for students of the experimental group during the period of study.

A comparative analysis of the average indicators of non-verbal creativity of the control and experimental groups during the experiment makes it possible to talk about the absence of a statistical difference between all test indicators, which indicates the homogeneity of the group at the beginning of the experiment and the effectiveness of the use of the developed curricula that

allow students to develop such creative abilities as non-standard thinking, intellectual potential, originality of solutions, the ability to generate new ideas, the effectiveness of problem solving, etc. (Fig. 3).



**Fig. 3. Indicators of creativity of students of the control and experimental groups**

In addition to non-verbal creativity, the study tested the verbal creativity of students of the control group who studied offline according to the existing curriculum in the discipline "Organization and Management of Physical Culture" and the experimental group who studied online according to a new program adapted to distance learning. The results of determining the index of verbal and non-verbal creativity of students of both groups at the beginning and end of the study are presented in Table 3.

Table 3

**Indicators of verbal and non-verbal creativity of future specialists  
in the sports field**

September 2021				December 2022			
Indicators of creativity							
Verbal (1)		Non-verbal (2)		Verbal (1)		Non-verbal (2)	
Originality Index 1	Uniqueness Index 1	Originality Index 2	Uniqueness Index 2	Originality Index 1	Uniqueness Index 1	Originality Index 2	Uniqueness Index 2
Control group							
0,63	2,14	0,64	2,14	0,85	7,8	0,80	3,42
Experimental group							
0,69	3,87	0,71	2,75	0,88	8,25	0,86	4

Table 3 shows that the methodology for the development of creativity and creativity introduced by teachers into the educational process is effective, since the indices of verbal and non-verbal creativity of students of the control and experimental groups significantly increased in the learning process during the experiment. Thus, the average index of originality of verbal creativity in the control group increased by 19% – before the beginning of the experiment it was 0.63, and after the experiment it became 0.85, the index of verbal uniqueness increased by 5.66 points from 2.14 to 7.8 points with the maximum allowable value – 12 points, the average indicators of non-verbal creativity also increased – the index of uniqueness by 13% (from 0.64 to 0.80), the index of uniqueness by 1.28 points from 2.14 to 3.42 white (with a maximum indicator of 5 points).

Indicators of creativity in the experimental group also increased during the study, so the average index of originality of verbal creativity in the control group increased by 17% – before the start of the experiment it was 0.69, and after the experiment it became 0.88, the index of verbal uniqueness increased by 4.38 points from 3.87 to 8.25 points with the maximum allowable value of 12 points, the average indicators of non-verbal creativity also increased – the index of uniqueness by 13% (from 0.71 to 0.86), uniqueness index by 2.72 points from 2.74 to 4 whites (with a maximum indicator of 5 points).

So, summing up the above, it can be stated that during distance learning, subject to the use of interactive pedagogical technologies, it is possible to purposefully influence the development of creative abilities and creativity in future specialists in the sports industry, which are one of the important additional competencies necessary in their professional activities.

Our research confirms the opinion of scientists that the formation of professional competence of future specialists in the field of sports is an integral part of the formation of high-level specialists in the field of sports and physical culture<sup>26</sup>. The work reflects the idea<sup>27,28</sup> that in the process of forming the professional competence of future sports specialists, it is necessary to purposefully develop abstract thinking, critical thinking, self-development, sociability, responsiveness, creativity, flexibility through the use of methods of business game, case method, facilitation, coaching.

The results obtained in the course of the study complement scientific research in the direction of improving the process of training specialists in physical culture and sports, aimed at mastering the "soft skills" necessary in further professional activities<sup>29</sup>. The hypothesis about the effectiveness of the use of remote technologies in the process of training specialists in the sports industry has been confirmed<sup>30</sup>, what makes distance learning one of the promising areas of education development.

## CONCLUSIONS

Distance learning opens up new opportunities for training sports specialists, providing flexibility in the educational process and access to modern educational resources. Thanks to interactive methods and the use of the latest technologies, students can receive knowledge in a format convenient for them, which contributes to the improvement of their professional competencies. However, it is important to take into account the challenges that arise in the process of distance learning, such as the need for independent work and interaction with teachers. To achieve maximum results, it is recommended to combine distance methods with practical classes, which will provide an integrated approach to the training of future specialists in the sports field.

The study showed that distance learning has a positive effect on the formation of "soft skills", such as creativity and creativity, in applicants for higher education in the field of physical culture and sports and can become a

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<sup>26</sup> Prystupa, Y., Kryshchanovych, S., Danylevych, M., Lapychak, I., Kryshchanovych, M., Sikorskyi, P., Podolyak, Z., Basarab, V. Features of formation the professional competence of future managers of physical culture and sports. *Journal of Physical Education and Sport*. 2020. Vol 20 (Supplement issue 1), 441 – 446. <https://doi.org/10.7752/jpes.2020.s1064>

<sup>27</sup> Çiftçia, S., Mirzeoğlu, N. The research of qualifications of sport manager. *Procedia – Social and Behavioral Sciences*. Volume. 2014. 152. 740 – 745.

<sup>28</sup> Singh, D. Sports management and curriculum design in physical education. New Delhi. 2021. 192 p. URL: <https://www.researchgate.net/publication/340442497>

<sup>29</sup> Kondur, O. et al. Soft skills formation of future athletes and physical education teachers. *Journal of Vasyl Stefanyk Precarpathian National University*. 2022. Vol. 9, No. 1, 27-36. <https://doi.org/10.15330/jpnu.9.1.27-36>

<sup>30</sup> Dina A.M. Miragaia, Jorge A.P. Soares. Higher education in sport management: A systematic review of research topics and trends. *Jornal of hospitalsty, leisure, sport and tourism education*. 2017. 21. 101-116. <https://doi.org/10.1016/j.jhlste.2017.09.00>



promising direction for the development of modern sports education. In the course of the study, a curriculum in the discipline "Organization and Management of Physical Culture" for future specialists in the field of sports of the 3rd and 4th years was developed and adapted for distance learning online. Fischer) in all indicators of creative abilities, except flexibility, in the students of the experimental group, in particular, speed, originality, development, as well as an increase in the index of originality and uniqueness in verbal creativity and the index of originality and uniqueness in non-verbal creativity.

Students of the control group also have a significant increase in the indicators of the development of creativity and creativity in the process of studying according to the existing program in offline mode, which is confirmed by the statistical significance of the difference between the indicators before and after the experiment (according to the Fisher criterion).

Comparison of the test results of the control and experimental groups before and after the experiment showed that they do not differ significantly, since there was no statistical significance in the difference between the indicators of the two groups, which makes it possible to assert the effectiveness of the development of creativity and creativity in the learning process both offline and online.

## **SUMMARY**

In the course of the study, the influence of distance learning on the quality of the formation of students' knowledge and skills, on their readiness for practical activities in the sports field was studied. A curriculum for future sports specialists has been developed and implemented in the educational process and adapted for distance learning. It has been established that distance learning has a positive effect on the development of "soft skills".

Distance learning contributes to the introduction of new technologies and methods into the educational process, which ensures the competitiveness of future specialists in the labor market and can become a promising direction for the development of modern sports education.

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