Cybersports education in Ukraine: current state and development prospects

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Abstract

Purpose: based on the study of scientific literature on Internet sources, to analyze the current state of cybersports education in Ukraine and determine the prospects for its development.

Material & Methods: the material of the study is the scientific literature and Internet sources, which highlight the current state of cybersport and cybersport education in Ukraine. Research methods: analysis, generalization and systematization of data; historical, logical, problem-search, prognostic.

Results: cybersport is a promising sports and economic area, which is based on the use of computer games. At the same time, cybersport is a new socio-cultural phenomenon that requires reflection by philosophers, culturologists, psychologists and art historians. The advantage of cybersport is the possibility of organizing competitions remotely, which allows you to involve a larger number of spectators. The latter fact makes cybersport attractive enough for potential sponsors and advertisers. The development of cybersports requires the involvement of professional cybersports players with appropriately developed cognitive abilities and psychological qualities, as well as other specialists who ensure the constant and uninterrupted organization, holding and coverage of sports competitions at the proper level (coaches, psychologists, managers, public relations specialists, commentators, analysts, marketers, directors, etc.). In the universities of Europe, America, Asia, educational programs aimed at obtaining education in the field of cybersports are quite diverse and presented in sufficient quantity. Unlike foreign institutions of higher education, domestic universities practically do not offer educational programs that meet the needs of the cybersports market. Therefore, cybersports education in Ukraine is a promising educational area that meets the modern needs of the labor market and the needs of potential employers.

Conclusions: cybersports education in Ukraine is a promising educational area that meets the modern needs of the labor market and the needs of potential employers. At the same time, it requires determining the real needs of the domestic cybersports market in order to develop and implement relevant educational programs aimed at training specialists in this industry. The information obtained will allow developing and offering new educational programs that will allow Ukrainian cybersports to take its rightful place on the world stage.

Анотація

Наталія Циганoвська, В'ячеслав Гончар, Вадим Данилян, Світлана П'ятисоцька. Кіберспортивна освіта в Україні: сучасний стан та перспективи розвитку. Мета: на підставі вивчення наукової літератури на інтернет-джерел проаналізувати сучасний стан кіберспортивної освіти в Україні та визначити перспективи її розвитку. **Матеріал і методи:** матеріалом дослідження є наукова література та інтернет-джерела, в яких висвітлюється актуальний стан кіберспорту та кіберспортивної освіти в Україні. Методи дослідження: аналіз, узагальнення та систематизація даних; історичний, логічний, проблемно-пошуковий, прогностичний. **Результати:** Кіберспорт являє собою перспективну спортивну та економічну галузь, в основі якої лежить використання комп'ютерних ігор. Водночас кіберспорт представляє собою новий соціокультурний феномен, що потребує осмислення філософів, культурологів, психологів та мистецтвознавців. Перевагою кіберспорту є можливість організації змагань у дистанційному режимі, що

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Ключові слова:
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дозволяє задіяти більшу кількість глядачів. Останній факт робить кіберспорт досить привабливим для потенційних спонсорів та рекламодавців. Розвиток кіберспорту потребує залучення професійних кіберспортсменів із відповідно розвиненими когнітивними здібностями та психологічними якостями, а також інших фахівців, що забезпечують постійну та безперебійну організацію, проведення та висвітлення спортивних е-змагань на належному рівні (тренерів, психологів, менеджерів, фахівців із коучингу, брендингу, зв'язків із громадськістю, коментаторів, аналітиків, маркетологів, режисерів-постановників тощо). В університетах Європи, Америки, Азії освітні програми, спрямовані на отримання освіти в галузі кіберспорту досить різноманітні та представлені у достатній кількості. На відміну від закордонних закладів вищої освіти, вітчизняні ЗВО практично не пропонують освітніх програм, які відповідають потребам ринку кіберспорту. Тому кіберспортивна освіта в Україні є перспективним освітнім напрямом, що відповідатиме сучасним потребам ринку праці та запитам потенційних роботодавців. **Висновки:** Кіберспортивна освіта в Україні є перспективним освітнім напрямом, що відповідатиме сучасним потребам ринку праці та запитам потенційних роботодавців. Водночас вона потребує визначення реальних потреб ринку вітчизняного кіберспорту задля розробки та впровадження актуальних освітніх програм, спрямованих на підготовку фахівців зазначеної галузі. Отримана інформація дозволить розробити та запропонувати нові освітні програми, які дозволять українському кіберспорту посісти належне місце на світовій арені.

Introduction

Global digitalization is significantly changing the world, putting forward new requirements for many sectors of the economy, production, culture and education, changing established ideas even about traditional areas. E-commerce, e-banking, administrative e-services have recently been supplemented by various scientific, artistic, cultural, and entertainment events in digital format (remote scientific conferences and internships, industrial presentations in online format and virtual excursion tours, etc.).

At present, it is digitalization that is the main driver of changes in society and, therefore, in sports, Riatti and Thiel (2021) argue. The Ukrainian society is gradually joining the global trend in the development of sports and cybersports, which has already received global recognition in the world. Objectively, the number of people professionally involved in cybersport as athletes and/or organizers of cybersports competitions and tournaments is growing (Briskin et al., 2015).

From 2018 to 2019, the total number of cybersports jobs grew by 87%, from 5869 to 11027 jobs respectively. The total number of potential vacancies in cybersports in 2021 was more than 12,000 (Jenny et al., 2021). As T. Savchuk (2022) notes: "... cybersport is not just shooting games, but a fundamental element of modern digital culture. Today, cybersport can even be studied at the university, and there are more and more jobs in this area" (Lysenko & Morozova, 2020). Dynamic development of the cybersport market in Ukraine (Horova et al., 2016; Tsaranenko, 2018; Chaika, 2018; Lytvin & Vakulka, 2021) increases the demand for professional athletes/players, administrators, managers and other professionals involved in organizing cybersports competitions. A team of Ukrainian scientists based on the results of their own exploratory research (Shynkaruk et al., 2020, p. 115) also testifies not only to the growing popularity of cybersports, its globalization as a sport, but also to the trend towards increased demand from employers and the interest of higher education in training personnel for the cybersports industry.

The professionalization of the industry is inextricably linked with the possibility of obtaining professional education. It should be noted that non-formal education in the field of e-sports is actively developing today. Thus, cybersports organizations and federations create private schools and academies that allow them to develop their own gaming skills, as well as learn how to create games and hold competitions.

Higher education institutions are just beginning to recognize the potential value of cybersports education as the cybersports industry continues to grow. There are full-fledged educational programs in this area only in three domestic universities (Kharkiv State Academy of Physical Education, Petro Mohyla Black Sea National University and the National University of Physical Education and Sports of Ukraine), which is certainly not enough, and requires a detailed study of the current state of the cybersports market, to analyze its needs, existing educational programs and determine possible directions for the development of domestic cybersport education.

Purpose of the study: based on the study of scientific literature on Internet sources, to analyze the current state of development of cybersports education in Ukraine and determine the prospects for its development.

Material and Methods of the research

The research material is specialized scientific literature and Internet sources, which highlight the current state of cybersports and cybersports education in Ukraine. Research methods: analysis, generalization and systematization of data; historical, logical, problem-search, prognostic.

Results of the research

Cybersports is "a kind of sport that is a training and competitive activity in a virtual space based on computer and / or video games, which is characterized by the constant rules of sports competitions, interpersonal relationships between players, where a player or team interacts with a competitive environment in real time, mediated sports equipment, at a certain distance and the impossibility of breaking away from the competitive environment during the competition" (Shinkaruk & Anokhin, 2021, p. 50).

A relatively small number of scientific works of domestic and foreign experts are devoted to the study of the phenomenon of cybersports and especially cybersports education, which is explained by the relative youth of cybersports, on the one hand, and the ambiguous perception by a part of society, on the other. An analysis of recent publications shows that the features and possibilities of cybersports as a cultural, economic, educational and sports phenomenon are of interest to many modern domestic and foreign scientists. Thus, cybersports as a modern cultural and social phenomenon is described by Riatti and Thiel (2021), Ganaga et al. (2021), Savchuk (2022), Shinkaruk et al. (2020); the essence and features of the development of the cybersports industry in the world are systematized by Reitman et al. (2019), Wagner (2015), Tsaranenko (2018), Shinkaruk et al. (2019); in Ukraine - by Lytvyn and Vakulka (2021); trends in the development of

the cybersports market in Ukraine were determined by Gorovoy, et al. (2016), Zozulev and Chaika (2019); the definition of the concept of "cybersport" was provided by Shinkaruk and Anokhin (2021); the history of the development of cybersport and the prospects for its further development are considered by Bulgakov (2019); periodization of cybersports development was proposed by Briskin et al. (2021); the subjects of the cybersports market and the relationship between them are analyzed by Chaika and Zozulev (2019); signs of cybersports as a sports discipline are systematized by Lysenko and Morozova (2019); the problems of training cybersports specialists are analyzed by Jenny et al. (2021), Alekseeva and Alekseenko (2019).

According to the periodization proposed by Briskin et al. (2021, p. 13), it is expedient to divide the process of cybersports development into three stages: 1) 1972-1988 (1972 - the first mention in information sources of organized video game competitions; competitions were organized exclusively by game developers with the aim of advertising their own products, the sports result was determined by means of objective metric calculations; there was no mechanism for making a profit in monetary terms); 2) 1988-2011 (the appearance of games that support the Internet connection; organization of competitions for sponsorship and with the help of distance technologies; emergence of professional structures specializing in holding competitions; the latter acquire entertainment and coverage through popular internet platforms); 3) from 2011 to the present (thanks to the appearance in 2011 of the Twitch TV video streaming platform, a mechanism is being created for the sale of online tickets and licensed products, ad monetization processes are improving, which entails a rapid increase in sponsorship funding, prize funds, and athletes' salaries professional players, active development and improvement of cybersports education, development of special software).

According to S. Hunter, at the present stage of development of cybersports, its subjects are: cybersports players themselves, competition organizers, fans, game developers, bookmakers, sponsors, clubs/associations, media and streaming platforms or TV channels (Chaika & Zozulov, 2019, p. 320). Together, they form an integral system, subject to market laws. Based on their interests, each of them has its own role and responsibilities. The key players in the cybersports market are the players (Chaika & Zozulov, 2019, p. 322).

The ecosystem of the cyber industry, according to Russian scientists Lytvyn and Vakulka (2021), consists of the following structural elements: game developers - people who create a product; video games - the actual product (for example, Dota 2, Overwatch, League of Legends, Counter-Strike, etc.) that meets the criteria of an cybersports discipline; cybersports organizations; direct participants in cybersports competitions teams and/or individual players; tournament operators and other intermediaries directly providing the holding of events, their advertising and media coverage; broadcast streaming platforms (Twitch, YouTube, etc.); National and international federations and professional cybersports associations whose activities are aimed at promoting cybersports, attracting investments, developing a professional cybersports infrastructure; fans (Lytvin & Vakulka, 2021, p. 169).

Professional cybersport athletes, according to Imas et al. (2021), must be stress-resistant, creative, have well-developed reactions and motor skills, analytical thinking, the ability to make quick decisions in non-standard situations, be able to work in a team (in the case of team competitions) (Imas et al., 2021, p. 77), also, "like any kind of sport, cybersport and a cybersport athletes needs social, scientific and psychological support and, obviously, the support of a cyberpsychologist" (Imas et al., 2021, p. 77). All this requires the creation of full-fledged, systematized educational programs aimed at the thorough training of various specialists for cybersports: athletes, coaches, administrators / managers, psychologists, streamers / hosts / commentators of cybersports competitions, public relations specialists, etc. the latter, according to E. Imas, today are very few in Ukraine (Imas et al., 2021, p. 77).

In Western countries, secondary or higher education in the field of cybersports is already becoming commonplace. In order to train specialists in the field of the cybersports industry, there are more than 50 educational institutions in the United States alone where there is such a specialization. The countries of Europe and Asia are not far behind. According to Jenny et al. (2021) there are more than 80 bachelor's and master's cybersports programs in the world in 2021, offered by 62 different institutions of higher education around the world, mainly located in North America and Europe. The vast majority of these programs (77,5%) are focused on the cybersports business (e.g., management, marketing). In addition to full-fledged educational programs in the field of cybersports, there are many universities that offer separate courses in cybersports, which also do not offer academic programs in cybersports. Thus, cybersport disciplines were added to the main school curriculum at The Games Vidaregaande Skule (Norway) and Arlandagymnasiet (Sweden). You can enroll in a one-year course in cybersports and game design (Informatics Academy, Singapore) or study in a three-year game skills development program (Lanxiang Vocational School, China). In addition, there is an opportunity to get a bachelor's degree in cybersports (Staffordshire University, UK).

Academic programs in cybersports have the following direction (according to Jenny et al. (2021): cybersports business/management/administration (22%), theoretical aspects of the functioning of cybersports/history of cybersports (13%), production of cybersports services/cybersports media communications/public relations (12%). Among others: cybersports coaching, event management, cybersports marketing, coaching, cybersports job management. The main focus is on the gaming preparation of cybersport athletes/players for their future careers. The cybersports training program includes: development of cognitive skills and digital intelligence, teamwork, communication and adaptability.

In Ukraine, opportunities for education in the field of cybersports are much less. In particular, since 2018, the specialization "Computer sports (cybersport)" has been launched at the Kharkiv State Academy of Physical Culture as part of the educational program "Coaching in the chosen sport" for the first (bachelor's) and second master's levels of higher education. Since 2019, you can get a master's degree in the educational program "Cybersport" at the National University of Physical Education and Sports of Ukraine (NUUPES).

Theoretical and practical training of future coaches in the educational program "Computer Sports" at the I (bachelor's) level of higher education at the Kharkiv State Academy of Physical Culture includes: computer game theory, cybersports ergonomics, management and marketing trends, mastering basic gaming, information technology in sports, the theory and methodology of sports training, as well as practical physical training, pedagogical skills, sports psychology, scientific research methods, anatomy, physiology, statistical research methods in sports, etc. Upon graduation, graduates

receive the qualification "Cybersports (e-sports) coach".

The Petr Mohyla Black Sea National University involved experienced cybersport athletes in teaching under the new educational program "Cybersports" at the first (bachelor's) level of higher education, and included the practice of playing in a team in the practical training program from the second year. The compulsory subjects included gaming theory, sports law, biomechanics of body organization in cybersports.

You can get a master's degree in the Cybersports educational program at the National University of Physical Education and Sports of Ukraine (NUUPES). Future master's study innovative technologies in cybersports, cybersports infrastructure, computer gaming theory, professional gaming, strategic management, modern management and marketing trends in the work of the cybersports club and cyber arena; psychological support of sports activities, a system of training and competition in cybersports, leadership and an education team in cybersports, psychoregulation in sports activities of gamers, event management in cybersports, etc. Not only theoretical teachers are involved in the training, but also practitioners in the field of cybersports. After graduating from the master's program, specialists will have the opportunity to work in various qualifications - trainers, PR journalists, commentators, psychologists, managers.

Promising areas of esports education in Ukraine, which create prerequisites not only for the career of an cybersports athlete/player, but also allow them to further realize themselves in many other areas, are: 1) management, administration, management of an cybersports team/club; 2) coaching and mentoring; 3) PR and marketing of cybersports events; 4) organization of cybersport tournaments, championships, competitions and other events; 5) commenting on cybersports measures and their analytics; 6) development of games and other products for the cybersports industry; 7) game design; 8) cybersports journalism; 9) branding.

The training program for specialists in the field of cybersports must necessarily include disciplines, both general disciplines that allow to form a certain level of culture and general awareness of a specialist, and professional educational components designed to develop professional competencies in the field of cybersports (in particular, games, gaming, information technology in sports, modern digital technologies, theory and methodology of cyber training, etc.). Taking into account the significant number of international tournaments and competitions, the skills of free communication in English will be useful for future cybersports specialists, which will be a significant advantage for the graduate during employment. An important competence is also the ability to maintain physical and mental health, which can be realized through systematic physical activity and the study of the theory and practice of stress management (necessarily with elements of practical training to relieve and minimize stress through various means). The qualification of a journalist or PR-specialist in the field of cybersports, of course, requires perfect command of the literary Ukrainian language, skills in working with text, copywriting, promotion of sites/web pages in social networks, communication and conflict management.

Discussion

Thus, cybersports is one of the modern sports, which is a form of competitive activity, which is based on the use of computer games that require the development of specific cognitive abilities and psychological qualities in cybersport athletes. Cybersports is not just a sports competition, but a completely new socio-cultural phenomenon that requires reflection from specialists in various fields, primarily philosophers, culturologists, psychologists, and art historians.

The launch of the webcasting platform in 2011 allowed for a rapid increase in viewership and, as a result, made cybersports competitions commercially attractive. The latter requires not only the proper professional level of cybersports players, but also the appropriate level of organization, coverage and entertainment of the competition itself.

The professionalization of cybersports has led to the need to train a number of specialists who can competently ensure the planning, organization and conduct of cybersports at the proper level (coaches, psychologists, managers, coaching, branding, public relations specialists, commentators, analysts, marketers, directors etc.). In the universities of Europe, America, Asia, educational programs aimed at obtaining education in the field of cybersports are quite diverse and presented in sufficient quantity. Unlike foreign institutions of higher education, domestic universities practically do not offer educational programs that meet the needs of the cybersports s market. The exceptions are two programs on the bachelor's level of higher education (Kharkiv State Academy of Physical Education, Petro Mohyla Black Sea National University) and a master's program (National University of Physical Education and Sports of Ukraine), as they cannot fully meet the needs of the Ukrainian cybersports market in professional personnel.

Conclusions

Cybersports education in Ukraine is a promising educational area that meets the modern needs of the labor market and the needs of potential employers. At the same time, it requires determining the real needs of the domestic cybersports market in order to develop and implement relevant educational programs aimed at training specialists in this industry. The information obtained will allow us to develop and offer new educational programs that will allow Ukrainian cybersport to take its rightful place on the world stage.

Prospects for further research in this area are related to the need to carefully study the structure of the cybersports market and the requests of employers in order to determine specific qualifications and specializations that will be in demand in the field of cybersports, as well as content components for future educational programs. The information obtained will allow us to develop and offer new educational programs that will allow Ukrainian cybersport to take its rightful place on the world stage.

Author Contributions

Natalia Tsyganovska: research planning, data collection, analysis and interpretation. Vyacheslav Gonchar: search and analysis of literature, data entry. Vadym Danilyan: search and analysis of literature, data entry, manuscript preparation. Svitlana Pyatysotska: research planning, analysis and interpretation of data, preparation of the manuscript.

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Conflicts of Interest
The authors declare no conflict of interest.

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