

Distance-pedagogical technologies in Olympic education for schoolchildren

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Abstract

Problem. This paper discusses new approach to implementing Olympic education among schoolchildren using distance-pedagogical technologies or e-learning approach. On the basis of comprehensive literature analysis and pedagogical experiment of implementing distance technologies in the system of Olympic education for secondary schools, there is presented a way of implementing “Olympic Legacy” module created in the International Olympic Studies and Education Centre affiliated to the Olympic Education and Science Institute of the National University for Physical Education and Sport of Ukraine. **Material.** The studies were conducted on the basis of the International Olympic Studies and Education Centre affiliated to the Olympic Education and Science Institute of the National University for Physical Education and Sport of Ukraine. The teachers of general secondary education level took part in the research (n = 133). The main objectives of the study were to find out the motivational dominants and individual requirements of the respondents for the use of didactic material on Olympic topics presented in the module “Olympic Legacy”, as well as the factors that influence the effectiveness of distance-pedagogical technologies for Olympic students. **Results.** The leading role in involving secondary school students and teachers in the work of the Center for Olympic Studies belongs to distance pedagogical teaching technologies. The studies show that the on-line and off-line materials of the module “Olympic Legacy” can be incorporated into the educational process of students and are one of the most effective mechanisms for disseminating Olympic values in today's information space. The results of pedagogical experiment among teachers show that the effectiveness of introduction of distance-pedagogical technologies of training in Olympic education depends on: quality of use of materials (initial courses, methodical developments, etc.); proficiency of teachers and tutors involved in distance learning; technical support of the educational process; motivation of the tutor; module users' motivation. **Conclusions.** The implementation of the "Olympic Legacy" module in the distance learning process in the Olympic education system made it possible to determine the expediency of its use by the participants of the educational process.

Key words: Olympic education, Olympic legacy, e-learning, distance-pedagogical technologies, schoolchildren.

Introduction

In the information space, the definition of ‘Olympic education’ appeared in the XX century. It was first highlighted in a report of S. Favre (Italy) in 1968 at the 8th session of the International Olympic Academy. Analysis of domestic and foreign scientific and methodological literature shows that there is no consensus on the definition of the term ‘Olympic education’. The problem is a broad understanding of this definition.

The principles and values of Olympism can be understood and accepted as a particular life position, behavior, pedagogical approach, especially in sports and cultural activities. According to Dr. Konstantinos Georgiadis, the concept of Olympic education is a multi-level process that is an integral part of general education and aimed at meeting the needs of the population in order to attract it to Olympic values through sport and culture (Georgiadis K., 2007).

According to the definition of Professors M. Bulatova and V. Platonov, Olympic education is a pedagogical process aimed at spreading knowledge about Olympism; the history of the Olympic Games of Ancient Greece and the present; principles and ideas of modern sport; the place of Olympic sports in the education and training system, its relation to other phenomena of public life; theory and practice of training and competitive activity of athletes (Bulatova M., Platonov V., 2018).

The Olympic education system has a multilevel and branched structure. The Olympic Studies Centers are an integral part of the Olympic Movement, each of them has its own specificity and focus on information support for the Olympic sport, peculiarities in the use of distance learning technologies and creation of informational educational web-resources. Based on theoretical analysis of the scientific literature, it is established that the Olympic Studies and Education Center is a cultural and educational institution, which is a source of modern Olympic knowledge, seeks to provide experts and researchers with access to information and collections that stimulate intellectual exchange and research (Zagitova, 2018).

The centers are a part of the International Olympic Movement system and provide their learners and users of information resources with up-to-date information on Olympism and the Olympic Games, as well as the introduction of distance learning technologies. The activities of the Olympic Studies Centers in the countries of the world are coordinated by the International Olympic Committee (Naul R., etc., 2017).

According to official information sources, 43 Olympic Studies and Education Centers are currently operating and supported by the IOC. One of the first was established the Olympic Studies Center at the University of Texas at Austin (1983), the Autonomous University of Barcelona (1989) and the International Olympic Studies Center at the University of Western Ontario, Canada (1989).

The IOC's Olympic Studies Center, located in Lausanne, Switzerland, was opened in 1993. It is affiliated to the Olympic Museum, created by Pierre de Coubertin in 1915, and has a documentary structure Department, Photo and Video Archives, the Olympic International Library, with sources in paper, digital and electronic media. The main purpose of the Center is to provide information and analytical support for research in history, peculiarities of organization and conduct of the Games of Olympiads, the Youth and Winter Olympic Games, the functioning and prospects of the Olympic sports development, coordination of information and communication support to the Olympic movement, as well as the dissemination of Olympic information through a variety of educational programs using traditional and distance learning technologies. The Center provides educational services to the general public, youth and educational institutions. The Center holds the archives of the Olympic Movement, since 1886. The audio and video foundation has more than 17,500 films since the Games of the I Olympiad. The photo storage holds about 410,000 documents. The library holds over 18,500 books and 250 periodicals. Important units of the OSC are the Olympic Education Support sections, which also operate on the base of the Olympic Museum and provide the Center with online and offline resources.

The OSC coordinates the activities of other centers, educational institutions and initiates scientific events (conferences, congresses, meetings). Thus, in 2019, the OSC held a series of online seminars on the sustainable development of the Olympic movement, the spread of Olympic values, and the like. The main elements of information and communication technologies used in the work of the data center are the online access to the holdings of the IOC Library, the archives of the Olympic Committees and the latest Olympic publications, the creation of an Olympic platform for information and the Olympic multimedia library.

In addition to the International Olympic Studies Center (Lausanne), there are successfully operating the Olympic Studies Center of the Autonomous University of Barcelona (1989), the International Center for Olympic Studies at the University of Western Ontario in Canada (1989), the German Olympic Institute (1990), the International Olympic Studies and Education Center of Ukraine (1992), Argentine Olympic Studies Center (1996), Italian Sports Center for Olympic Studies (1998), and others.

One of the most influential organizations that utilizes in its information-analytical and educational activities in the Olympic field is the International Olympic Studies and Education Center (IOSEC), which has been operating at the Education and Scientific Institute of Olympic Education affiliated the National University for Physical Education and Sport of Ukraine since 1992. The activities of the International Center are carried out in three main directions: scientific, educational and publishing ones. In a view of the IOSEC as an information and educational space, we were tasked with determining the feasibility of using distance-pedagogical teaching technologies in the school's Olympic education system.

Distance learning in the Olympic education system is a combination of interconnected components in which the main educational management tools are ICT-based hardware, communications systems and networks, used in the educational process by remotely tutor-led users at the Olympic Studies and Education Center.

The organizational structure of the distance education system in Olympic education integrates all components of the distance education system of educational institutions in the field of physical education and sport, and includes such components as legal, educational, organizational, human resources, technical, educational and financial ones. (Fig. 1)

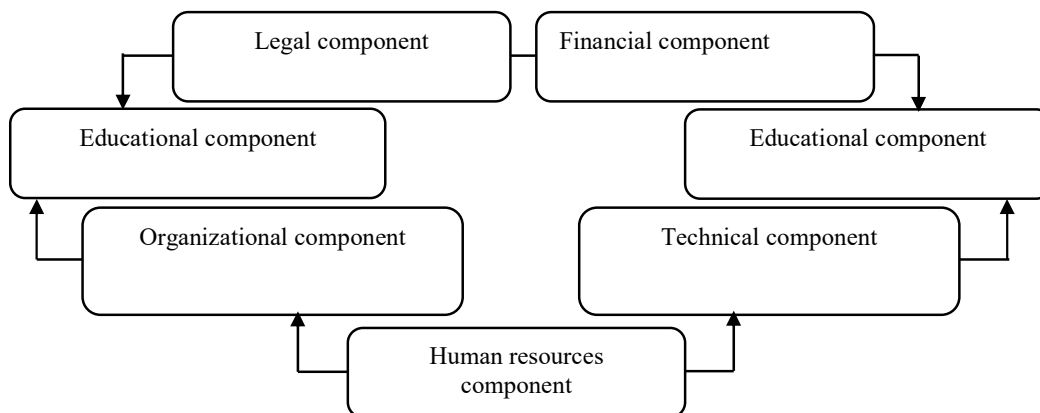


Fig. 1. Components of the distance learning system at the Olympic Studies and Education Center Based on the analysis of the sites of the Olympic Studies and Education Centers in different countries

and the method of comparative analysis, we have formed a general idea of the models of distance learning. According to the research objectives, we are most interested in two models, namely the case-technology and network technologies, which are most prevalent for general secondary education institutions (Table 1).

Table 1.

Characteristics of distance-learning models in the Olympic Studies and Education Centers

Distance learning models	Teaching tools	Means of didactic interaction	Forms of classes
Multimedia technologies	- multimedia presentations of lectures on Olympic topics; - electronic tutorials; - videos for independent work	In-person or online (smartphone, PC, email)	Constituent classes, lectures, seminars, independent work
Network technologies	- author's online course on Olympic education; - video materials for lectures and practical classes; - e-learning guides; - online testing and self-monitoring questions	Network video conferences and discussions, email	Online seminars, lectures, practical classes, consultations, personal work

Thus, on the base of the information provided in Table 1, one can see the differences between the two models of distance learning: if multimedia technologies involve the meeting of the Center users (teachers, students) with the tutor, the in-person transmission of materials, the network technologies do not provide this, and the interaction of the tutor and the Center user takes place on the Internet platform, which definitely requires creation of an appropriate module of distance learning in the Olympic education system.

Aim of the study is to justify the feasibility of implementation of distance technologies in the system of Olympic education for schoolchildren.

Material & methods.

Comprehensive analysis of scientific literature and web-resources on the research problem; questioning, methods of statistical data processing.

A pedagogical experiment, which consisted of three parts: ascertaining, creatively transforming, and finally ascertaining. The ascertaining part involved the study of the state of use of the distance pedagogical technologies in the Olympic movement in the educational process of secondary schools.

In the process of creatively transforming the research phase in the educational institutions of the main group, we have developed the recommendations on integrating the "Olympic Legacy" module into the e-learning system of Olympic education for schoolchildren with the aim of increasing Olympic literacy, involvement to the ideals and values of the Olympics of visitors to the Center, the preservation of the Olympic heritage in Ukraine and the world. The final ascertaining experiment allowed us to determine the effectiveness of a creatively transforming experiment. The experiment conducted as part of the study was parallel (changes in the control and main groups were considered), was executed in the usual for teachers environment, without violating the content of the curriculum. The research was attended by teachers of general secondary education ($n = 133$). The study involved 133 school teachers. Secondary schools representing various administrative units of the country (capital, administrative district centers, villages), as well as various types of educational institutions (secondary schools, lyceums, gymnasiums) from different regions of Ukraine, of which 66 were teachers from the main group (school № 78 - 23 teachers, Kyiv; lyceum No. 1 - 21 teachers, town of Storozhynets, Chernivtsi region; the gymnasium from the village of Varva, Chernihiv region - 22 teachers), and 67 teachers of the control group (school № 306 - 28 teachers, Kyiv; school № 27 - 20 teachers, Vinnitsa; the school village of Prilesnoye, Volyn region - 19 teachers).

By means of Fisher's exact criterion, there was determined the statistical significance of the difference between the number of students who answered positively to the questions of the questionnaire, the control and the main groups in a ascertaining and creatively transforming pedagogical experiment. Statistical processing was performed using the Statistica 10.0 application (Statsoft).

Results.

The Olympic Movement's heritage is a promising area for storage of knowledge on the Olympic Movement, the Games of Olympiads, the Youth and Winter Olympics, which creates preconditions for improving the Olympic education system. H. Preuss (2007) defined sport event legacies as the 'planned and unplanned, positive and negative, tangible and intangible structures created for and by a sport event that remain longer than the event itself'. The International Olympic Committee includes components such as sports, social, environmental, urban and economic in the Olympic heritage.

Legacy is a form of heritage. There are tangible heritages such as buildings, monuments, historical sites, works of art, objects, books, etc. There are also intangible heritages such as languages, films, music, scientific knowledge, customs, arts and crafts. Rituals, sport movements and techniques are part of the intangible heritage. Defining the term "Olympic legacy", the components are classified as objects of material and intangible culture

(alternatively called "hard" and "soft" forms) (Kaplanidou: 111). According to A. Kovaleva, the material heritage include those forms that are easily identified and measured. Among the heritage objects are urban and sports infrastructure, telecommunications and transport networks and more. Soft or intangible heritage features are characterized by abstract properties. The heritage of the Olympic movement is understood to be the achievements of the intangible culture: formation of outlook, multicultural interaction and integration, formation of ecological thinking, popularity, image, and cohesion of the local community, change of environmental safety standards, religious and ceremonial character and reflection in art (Kovaliova M., 2016).

Distance learning technologies in Olympic education are a complex of educational technologies that, thanks to the psychological-pedagogical and information-communication components, make it possible to realize the process of distance learning in educational establishments and academic institutions in Olympic education.

According to the results of the researches, the most useful elements of distance-pedagogical technologies according to the teachers of general secondary education (n = 133) were: familiarization with the theoretical course in Olympic education (7%); examples of practical tasks (34%); testing (self-control) (19%); Olympic video presentations and illustrations (40%).

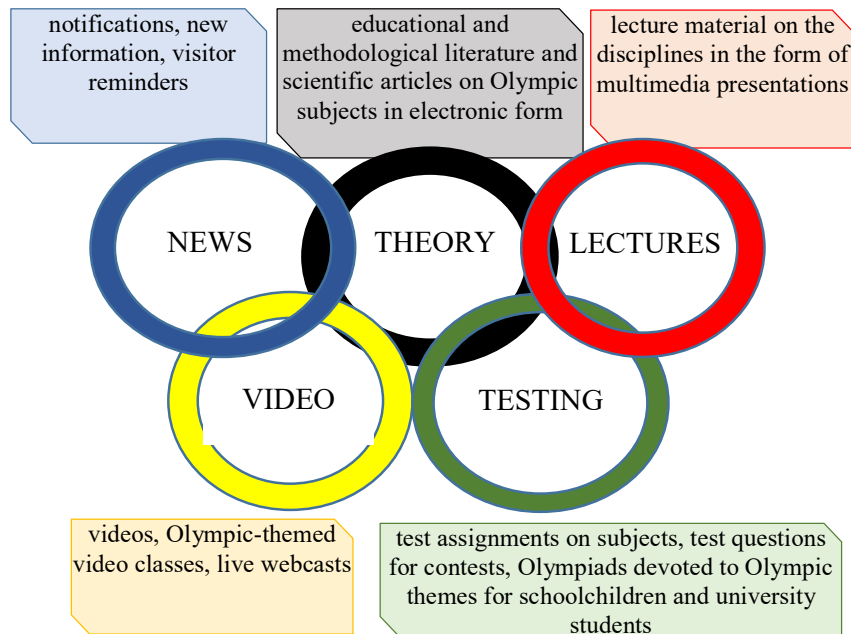


Fig. 2. "Olympic Legacy" module at the International Olympic Studies and Education Centre affiliated to the Olympic Education and Science Institute of the National University for Physical Education and Sport of Ukraine

On the basis of distance-pedagogical technology, we have proposed a theoretical model of the "Olympic Legacy" module for implementation at the International Olympic Studies and Education Centre affiliated to the Olympic Education and Science Institute of the National University for Physical Education and Sport of Ukraine. The purpose of the module is to increase the level of Olympic literacy, to attract to the ideals and values of Olympism the users of the Center (including students and teachers of general secondary education institutions), to preserve the Olympic heritage in Ukraine and in the world. We include five sections in the "Olympic Legacy" module: news, theory, lectures, video library, testing, similar to the five Olympic rings (Fig. 2).

According to the results of the researches, the introduction of didactic material presented in the "Olympic Legacy" module helps to increase the degree of innovativeness in the use of distance-pedagogical technologies in Olympic education. The positive result of the pedagogical experiment is evidenced by the increase of the indicators of the "High degree" of innovativeness of the implementation of the "Olympic Legacy" module in the experimental group of teachers (n = 67) compared to the control group of teachers (n = 66) who did not use didactic material work with students (Fig. 3). Thus, the introduction of the module "Olympic Legacy" helps to increase the innovativeness of distance-pedagogical technologies by 73% and lowers the average mark by 67% in the experimental group of teachers and leads to further self-improvement in the chosen subject.

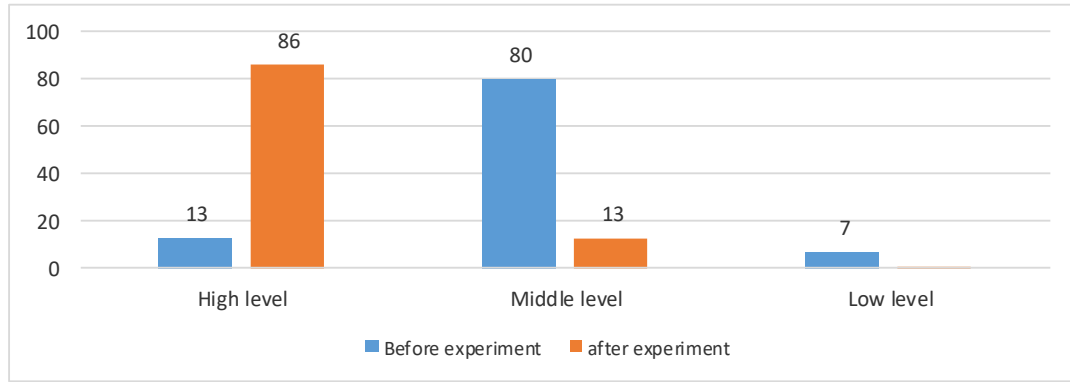


Fig. 3. Evaluation of degree of innovation in the use of distance-pedagogical technologies in Olympic education at general secondary education institutions, %.

A comparative analysis of the results of the study between the experimental and the control group of respondents (Table 2) indicates that all criteria for the effectiveness of the introduction of distance-pedagogical teaching technologies, selected for carrying out the pedagogical experiment, have been improved.

Table 2

Comparative table on effectiveness of implementing distance pedagogical technologies of the “Olympic Legacy” module for schoolchildren at experimental and control groups

Factors	Groups of educational institutions	Before experiment		After experiment		The difference after and before the experiment, %	The significance level of the differences before and after the experiment, %
		N	% of the total	N	% of the total		
The number of school children using gadgets (mobile, smartphones) for searching information in school	Experimental group in total, n=67	47	70.14	59	88.05	+1,25	0,001
	Control group in total, n=66	53	80.30	54	81.81	+1,01	0,450
	The statistical significance of the differences between the experimental and control groups	0,873		1,076			
Number of students attending sport events	Experimental group in total, n=67	21	31.34	46	68.65	+2.19	0,001
	Control group in total, n=66	18	26.86	20	29.85	+1.11	0,060
	The statistical significance of the differences between the experimental and control groups	1,166		2,299			
Number of schoolchildren who are aware of the connection between health and sport	Experimental group in total, n=67	44	65.67	65	97.01	+1.47	0,001
	Control group in total, n=66	40	60.56	43	65.15	+1.07	0,071
	The statistical significance of the differences between the experimental and control groups	1,084		1,489			
Number of schoolchildren who have improved their knowledge in PE academic discipline	Experimental group in total, n=67	34	50.74	65	97.01	+1.91	0,001
	Control group in total, n=66	38	57.57	42	63.63	+1,11	1,00
	The statistical significance of the differences between the experimental and control groups	0,881		1,524			
The number of school students who are familiar with Olympic values	Experimental group in total, n=67	51	76.11	66	98.50	+1,29	0,001
	Control group in total, n=66	39	59.09	41	62.12	+1,05	0,450
	The statistical significance of the differences between the experimental and control groups	0,611		1,228			

As a result of a survey of school teachers, there are identified the main motivational dominants that promote the introduction of distance-pedagogical technologies into the Olympic education system (Figure 4).

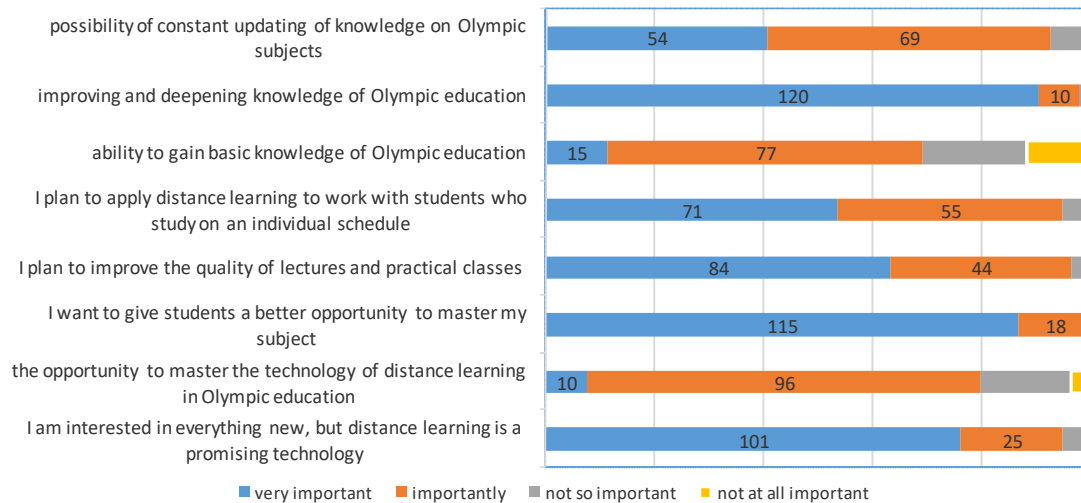


Fig. 4. Motivational dominants of general secondary education teachers in the use of didactic material on the Olympic topics of the “Olympic Legacy” module (number of responses of the chosen option)

The main motivational dominants, contributing to the use of distance-pedagogical technologies in Olympic subjects at the International Olympic Studies and Education Centre affiliated to the Olympic Education and Science Institute of the National University for Physical Education and Sport of Ukraine (following the results of 133 studies), have become the following ones: the opportunity of mastering the distance-pedagogical technology of teaching the Olympic education (72%), implementation of new content of knowledge on Olympic subjects for students (76%), improving the quality of physical education classes due to the use of didactic material on Olympic subjects (63%), the possibility of continuous updating the knowledge on Olympic subjects (58%), the use of distance learning to work with students studying external nom (53%).

According to the vast majority of the respondents the distance learning is needed in combination with traditional education (69% of respondents), very necessary (25%) and only 6% do not consider it necessary.

Discussion.

The results of the research show that in most cases that schoolteachers are ready to use ICT in the educational process, because they associate it with career progress, the desire to learn new tools and software, the opportunity to systematize educational material in electronic format and make it more visual. But there are many conservative educators among teachers who would like to continue teaching their subject using the old methods. Such conservatism of teaching staff is one of the organizational problems and can lead to the negative consequences of the introduction of distance-pedagogical technologies in the Olympic education system.

Conclusions.

The introduction of distance-pedagogical technologies in the Olympic education system contributes to the creation of conditions for improving the use of information resources of the Center for Olympic Studies, the formation of information and educational environment of distance learning in the Olympic education system, the formation of modern information content, and better quality of education in the field of physical culture and sports. The research results indicate the effectiveness of implementing distance pedagogical technologies of the “Olympic Legacy” module in the educational process of secondary schools, in particular, in the teaching such discipline as “Physical Culture”, which has been confirmed by positive changes in the number of school students using gadgets (mobile, smartphones) for searching information in school (by 1.25%; $p < 0.01$); attending sport events (by 2.19%; $p < 0.05$); those who are aware of the connection between health and sports (by 1.47%; $p < 0.01$); those who increased knowledge in PE academic discipline (by 1.91%; $p < 0.01$); those who are familiar with Olympic values (by 1.29%; $p < 0.05$).

Conflicts of interest. The authors have no any conflicts of interest to declare.

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