

The Formation of Single Open Education Space AS A LEADING TREND IN THE DEVELOPMENT OF THE MODERN EDUCATION SYSTEM



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Annotation

The article examines the essence and principles of the openness of education, its purpose, specifics and key directions of formation. The evolution of the development of open education institutions is examined and a comparative characteristic regarding the traditional higher education system is presented. The article proposes a review of the most competitive modern open education institutions, their advantages and specific features. Basic trends of the current stage of the development of on-line education have been systemized.

Key words: open education, on-line education, fundamental technologies, open on-line courses.

The new education paradigm reflects the needs of human civilization in the 21st century. In-depth and objective processes for the formation of a single open education space are on-going in the world.

A new principle of education is the management of knowledge on the basis of latest education

technologies. Specialized open-type education structures are created for this purpose.

Today, in one way or another, classic forms of education are experiencing a crisis in all countries of the world. The fundamental factors of this process in the sphere of higher education include:

— territoriality — the inability to ensure the attainment of necessary education for all people wanting to study;

— conservatism — the lagging of acquired knowledge from the level of informatization and technologies development;

— inertia — the poor adaptability of education systems to different socio-economic conditions;

— localization — the specificity of education, obtained at an individual education institution;

— limitation — the whole list of specializations may not be provided by regional higher education institutions to those, who wish to study on a specific territory¹.

The changing world calls for radically new demands in the substance of education, which should be based on fundamental values and knowledge. The development of the modern education system under current conditions, as shown by world experience, can successfully be ensured through the implementation of the principles of open education, such as:

— the open planning of studies, in other words, the freedom to compile individual study programmes by means of selection from the system of courses;

— the freedom to choose the time and rate of studies, or the enrollment of students in higher education institutions throughout the year and the absence of fixed study terms;

— freedom in the selection of the study location: students can be physically absent from study classes for the majority of the study period and can independently select where they want to study;

— the transition from the principle of «education for life» to that of «education throughout life»;

¹ Open Education – the strategy of the 21st century for Russia / V. M. Filippov, V. P. Tihomirov — M.: Publication MZSI, M., 2000.

— the free development of individuality, which is a fundamental factor, while the classic model of education presumes strict standards, which unify human individuality.

The idea of a personal approach as a fundamental factor of open education, to a large extent, has to correspond to the concept of education throughout a person's life. Together, they form the contours of a prospective education system, which will allow a person to understand himself/herself and the environment, and will assist in the execution of his/her social role in the life of society. For this, the structure of education programs is diversified, which allows each individual to build the education trajectory that best suits his/her education and professional capabilities.

Thus, open education is a flexible system for getting an education, accessible for everyone without an analysis of his/her literacy and the regulation of the periodicity and duration of an individual study course, which is developing on the basis of the formalization of skills, their transmission and control, using information and pedagogical distance study technologies. The specific features of the open education system also lies in the fact that it must be capable of not only arming students with skills, but also, as a result of its consistent and rapid updating, forming the need for continuous independent study, stimulating a creative approach towards a person gaining knowledge throughout his/her entire life.

The global goal of open education is the training of students for valuable and efficient participation in public and professional spheres under conditions of the informatization of society. Open education includes the student in developed information database systems, lifts space and time restrictions in work with different sources of information. Thus, information and its free circulation play a decisive role. The consolidation of the digital processing of data and telecommunications, modern means for the audio and video transmission of information and fibre-optic channels for passing on information, significantly increases the capabilities of networks, leading to the creation of new information technologies. The video, audio, computer and telecommunication means within them are combined with new, unexpected methods. In addition, demands made by users are becoming ever simpler, while information services are more individualized.

The most important directions for the formation of an open education system include:

— improving the quality of education by means of its fundamentalization and the application of new approaches, using new information technology;

— ensuring the «stay-ahead» nature of the entire education system and its focus on the problems of the future post-industrial civilization;

— ensuring greater accessibility of education to the people of the planet by means of the extensive use of the opportunities of open studies

and self-education with the use of information and telecommunication technologies;

— improving the creative origins (creativity) in education, in order to prepare people for life in different social environments (providing a «developing education»).

The problem of the socialization of the latest world trends in the development of the substance and forms of education had already emerged in the early 1970s. Institutionalization in education, or implementation of new public institutions and legal and organizational binding of various types of public relations, manifested themselves in quite a tangible diversity of forms. Open education is one such form.

Historically, one of the first open education institutions was the Open University in the United Kingdom, established by Royal Charter in 1969 as an independent university, which is on a par with other universities. The purpose for its creation is to offer the opportunity of gaining education to people who wish to study in a place, and at a time that is convenient to them. The Open University in the UK applies a wide range of methods for distance learning, such as written work, video and audio materials and Internet conferences, which are accompanied by the support of a tutor and regular group seminars and two-day visiting schools that are attended in person.

In the more than 40 years of its existence, the Open University has become a world leader of distance learning and strives to play a leading role in the expansion of higher and postgraduate education in the future, both in Great Britain and in other countries of the world. More than 150,000 people are currently studying at 400 learning centres, which teach according to the Open University's programme.

But historically, similar open universities did not play a significant role in the world education space, since they have adapted badly because of the significant share of the organizational component (an increase in the number of tutors was required for their expansion). Only today, thanks to social networks and the large-scale expansion of broadband access to the Internet, has the opportunity for the easy scaling of open courses emerged, when a well-prepared course can be attended by hundreds of thousands of people at the same time.

Deserving of particular attention is the Massachusetts Institute of Technology's Open-CourseWare (MIT OCW) project, regarding the publication of the materials of all of the Institute's courses to which there is free access. It emerged as a result of a range of initiatives, implemented by the Council on Educational Technology MIT. This initiative was distinguished with a number of awards and served as an example that was copied by other

universities. The project drew the attention of users from the whole world. More than 50 courses were translated into Chinese, Spanish, Portuguese and Persian. The countries where most visitors to the site live, with the exception of the USA, are China and India. More than 200 «mirrors» of the MIT OCW site have been created in the regions of Africa and Asia, where Internet access is difficult. The Massachusetts Institute of Technology's OpenCourseWare project gained great success as a means of scientific-technical education through the high quality of its materials and the large number of subjects that it covers.

Another interesting fact is that the program for the publication of MIT's open education resources is the most expensive one. The publication of one course requires USD 10,000—15,000. Such expenses are caused by the need to reduce the burden on the teaching staff. The team for the preparation of courses, in cooperation with the teachers, tries to ensure that the publication of one course takes no more than five hours of the teacher's time. The team's tasks include the digitization of handwritten texts, checking that superfluous materials are not included, such as illustrations and graphics from textbooks and obtaining permission for their use, as well as the creation of images, for which it was unable to get permission.

The Institute concludes license agreements, allowing it to circulate the materials, with the teachers participating in the project. According to the Institute's policy, the teachers keep the copyright. Similarly, students keep the rights to the published materials they have prepared. Courses that are taught at the Institute can also include materials, the rights to which belong to third parties. Such materials can be used for educational purposes, but access to them cannot be given to an unlimited number of people, and the coordination of the rights to their inclusion in OCW is a significant reason for delays in publication.

The publication of the materials of MIT courses was conducted with the expectation that the OpenCourseWare concept would be used by other education institutions. The first OpenCourseWare publication was the Fulbright Program on the teaching of economics in Vietnam in 2003. In 2004, OCW publication was begun at universities in Japan, China and France, as well as at several universities in the USA¹.

In 2005, MIT, together with other universities which publish open education resources, founded the OpenCourseWare Consortium. The tasks of this organization include the introduction and adaptation of open education materials for

use throughout the world. The most famous universities that are the parts of the Consortium, include the University of California at Berkeley, Tokyo University, Michigan University, University of California, Osaka University, Arizona State University, Utah University, Nottingham University and Michigan State University.

The main sponsor of OpenCourseWare and, in the broader sense, open education resources, is the Hewlett Foundation, which in the 2000s, has invested more than USD 110mn. It should be noted that the expenses from all sources is estimated at USD 150mn². The general problem of OpenCourseWare is the search for sources of long-term financing, since these projects don't actually provide any income³.

A vivid example of the process of forming an open education space is the Khan Academy — a non-commercial education organization, established in 2006 by Harvard graduate, Salman Khan. The purpose of the Academy is «providing high quality education to anyone, anywhere». The Academy's site provides access to a collection of more than 3,000 free educational video materials on mathematics, history, finance, physics, chemistry, biology, astronomy, economics and computer sciences. The materials provided are in the English language, but there is a project on their translation into other languages.

The main trend of online education in 2011 — early 2012 is the emergence of education platforms, offering free on-line courses by professors from leading universities of the world. These courses allow hundreds of thousands of students to gain an education that is on a par with a university education. A characteristic indicator of the high quality of open courses is the situation that emerged with Stanford University's course CS221 «Introduction to Artificial Intelligence», on the basis of which the on-line ai-class.org course was established. After its launch, out of 200 students, 170 considered it better to learn the on-line course lessons, than attend lectures at the university.

The largest on-line catalogue of free learning materials, comprising more than 500,000 lessons, video files and e-books (iTunesU), was recently established. The hundreds of colleges, secondary and higher education institutions that use this catalogue, include world class universities. Thus, open education is gradually becoming an alternative to classic higher education and has equal rights.

² Katie Hafner. An Open Mind. The New York Times (16 April 2010) http://www.nytimes.com/2010/04/18/education/edlife/18open-t.html?_r=1&pagewanted=all

³ Brendan F. D. Barrett, Velma I. Grover, Tomasz Janowski, Hanneke van Laveren, Adegboyega Ojo, Philipp Schmidt. Challenges in the adoption and use of OpenCourseWare: experience of the United Nations University // Open Learning. — 2009. — № 1. — <http://www.tandfonline.com/doi/abs/10.1080/02680510802627787>.

¹ Steve Carson. The Unwalled Garden: growth of the OpenCourseWare Consortium, 2001—2008 // Open Learning. — 2009. — № 1. — <http://www.tandfonline.com/doi/abs/10.1080/02680510802627787>.