

ADVANCES IN OPEN LEARNING TECHNOLOGIES IN EMERGING  
INFORMATION SOCIETY

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The matter of formation of information learning environment of educational systems is among the actual problems of modern education development and transformation. Implementing of ICT-based tools on modern high-tech base into the educational process to ensure the submission and use of qualitative electronic educational resources, organization of flexible and convenient access to them, rising the quality of educational services through ICT, empowerment of access to education improve its quality and effectiveness.

ICT-based tools appear to be an instrument of open and distance learning. Just open education technologies suit best to meet the challenges of solving urgent social, economic, educational and cultural problems of modern society, including the important one - improving accessibility and quality of educational services [1]. In this context we face new needs and goals, professional and educational aims associated with the current state of the information society development. One of the main purposes is formation of educational, social, professional and personal competencies of a learner that enable him to live and work in a high-tech environment of the rapid aging of knowledge and of a rising intensity of acquisition information processes.

The modern trend is a considerable variety and complexity of contemporary systems of e-learning. It provides opportunities for greater integration, concentration and choice. There is a need to develop and implement e-learning platforms, which provide an opportunity to improve access to e-learning, flexible and mobile presentation of resources and support the processes of their dynamic use and replenishment meeting requirements of quality and accessibility of education, in relation to the principles of open education paradigm and equal access to qualitative education [1].

Obviously, under intensive development of information society the technological platform of improvement of learning organization processes in most educational systems has to be based on the leading tools and technologies of the very information society and education among which there are just cloud technologies as a new stage of development of information and communication networks [3].

Unfortunately, the dissemination and application of modern methods and tools of e-learning is characterized by a number of negative trends, including such as:

- Deepening the gap between the features of modern information technological platforms of e-learning and equipment of educational institutions with the facilities and technologies for educational purposes;

- Deepening the gap between the needs of modern society in improving the quality of education and outdated technologies of supply of educational services.

The current state of development of information educational environment is characterized by increased demands for quality of information resources for scientific and educational purposes, for implementation of integrated platforms of access to these resources for educational institutions and individual users, for forms and methods of ICT-based learning used [2]. Among the reasons that prevent more intensive informatization is not only lack of the required number of computers, hardware and software. Among the main problems there is how to use hardware and software and what are the ways to improve the learning process under computer support. This require determination of trends of ICT development, analysis of advanced domestic and foreign experience, identifying the best examples of software and hardware, revealing the ways of selection of certain resources and e-learning systems.

Therefore, fundamental open learning technologies upgrade require analysis of didactic, methodological, technological, organizational and other aspects of application of emerging platforms and e-learning tools that have their methodological strengths and weaknesses, conditions of their implementation, as well as promising ways to use.

The emergence of new technological platforms, tools, providing a fundamentally new opportunities for delivery of educational resources, changes the picture of infrastructure of the learning process and its information content. There are emerging technologies of open learning such as adaptive information and communications networks, virtual and mobile learning etc. Introduction of cloud computing is a possible perspective of open e-learning systems platforms implementation.

Cloud computing (CC) is one of the promising directions of development of tools and services of modern information communication networks [3]. It gives new educational opportunities for individualization and differentiation of the educational process, its flexible adaptation to individual characteristics of learners. This educational effect is not assessed fully so far. There is a need to examine different methodological aspects of CC introduction to make good decision as for its educational benefits and most fruitful trends of application.

With the development of cloud computing technologies the capabilities of access and functionality of electronic resources have been increased. Thus, cloud computing technology opens a way for development of improved methods of multiple access to electronic resources and is a uniform methodology of a

single platform, the basis for development and testing, improvement and use of integrated methods for assessing the quality of these resources. For this reason, elaboration of effective methods of educational resources quality evaluation will improve the efficiency of their use.

Thus quality of electronic tools is especially significant in the context, when tools and platforms providing educational resources are intensively developed, changing forms and methods of environment organization and e-learning systems management. In order to be able to make a balanced decision regarding selection and appropriate use of this or that information and technological platform and learning resources to fill it, the problem of quality evaluation of ICT resources and tools is highlighted.

One of the main reasons for lack of quality of e-learning technologies is that the theoretical basis of quality evaluation was not developed enough [2]. Due to this system research are required, including optimization and parameterization of ICT quality and evaluation criteria, development of research methods of integrated quality assessment, grounding and testing of effective methods of mapping of educational tools and technologies to certain objective psychological and pedagogical requirements for their quality.

1. Bykov, V.: Models of Organizational Systems of Open Education, Kyiv: Atika (in Ukrainian) (2009)

2. Sanz-Santamaría S., Vadillo Zorita José Á., Gutiérrez Serrano J.: Mixing Standards, IRT and Pedagogy for Quality e-Assessment. In: Current Developments in Technology-Assisted Education. – FORMATEX, pp.926-929 (2006)

3. Sultan N.: Cloud Computing for Education: A New Dawn?. In: International Journal of Information Management, n.30, pp. 109–116 (2010)

**Аннотация.** Рассмотрены проблемы трансформации технологий открытого образования в условиях формирования информационного общества. Очерчены перспективы использования технологии облачных вычислений как платформы информатизации современных образовательных систем.

**Summary.** The problems of open education technologies transformation in the context of information society formation are described. The prospects of using cloud computing as a platform of informatization of modern educational systems are outlined.