

Trends in the Introduction of Modern Information and Communication Technologies in Educational Practice

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Abstract. *The rapid integration of modern information and communication technologies (ICT) into educational systems marks a significant shift in teaching and learning paradigms across the globe. This paper analyzes critical documents such as the outcomes of the World Summit on the Information Society, the Eurydice network's studies on ICT usage in European schools, and recommendations by the European Parliament and Council on key competences for lifelong learning, among other publications. It explores the experience of leading countries in implementing ICT in education. These include adopting ICT competencies as a means to acquire other essential skills, the introduction and funding of national informatics education programs, and the proliferation of cloud technologies, e-learning, and distance education. The development of repositories for electronic resources and the creation of models for assessing the state of informatics in educational institutions are also discussed. Key trends in the development of information technologies in education are highlighted, revealing a strategic emphasis on enhancing accessibility, interactive learning environments, and the continuous adaptation of educational frameworks to accommodate new technological potentials. This examination not only underscores the transformative impacts of ICT on educational methods but also the critical need for ongoing research to optimize and tailor these technologies to diverse learning landscapes.*

Keywords: *information and communication technologies; education system; model for assessing the state of informatization of educational institutions.*

INTRODUCTION

In the post-industrial society, information and communication technologies (ICT) radically change everyday life, making products and services more convenient, and the process of information processing and exchange more efficient. The use of information technology in education should serve to improve the quality, efficiency and accessibility of education for all ages, from schoolchildren to adults. The Internet has become a unique medium that provides global access to educational materials. This allows the integration of information resources and digital technologies into the global educational environment, enhancing the possibilities of learning and teaching through the Internet. Nevertheless, although there are many studies by domestic and foreign scholars on the informatization of education, various countries need to do the necessary work to adapt the national education system to the needs of the digital generation. Globally, the trends of ICT utilization differ from country to country. In some countries, laptops, tablets and mobile devices are widely used, which leads to the development of new forms of learning, while, on the other hand, in some countries there is limited access to computers and broadband Internet, which is a "digital phenomenon creating a difference.

DISCUSSION

The experience of leading countries of the world in introducing ICT in the educational process, study

and analysis of trends in the development of these processes are important in determining the ways of informatization of education for Uzbekistan. For example, recent studies and publications have focused on examining the barriers to ICT integration. J. Anderson, "ICT Transforming Education: A Regional Guide"¹ recommendations for teachers and trainers on the use of ICTs in transforming pedagogy in education are widely covered. "Information can be collected, stored, and shared using ICT, including laptops, cell phones, camcorders, e-books, and other devices," Anderson said. These technologies, along with services such as Google, email, Wikipedia, Skype, Facebook and Twitter, have the potential to change the future of living, learning, working and entertainment, taking mobile education and pervasive learning beyond the classroom. introduce new teaching methods such as tutoring and the flipped classroom.

Among the latest domestic studies on the development of information and communication technologies (ICT) in the field of education in the world V.Y. The collective monograph edited by Bykov is noteworthy. In this work, special attention is paid to theoretical and practical issues related to the formation of educational information space. Also important is a number of articles on the problems of informatization and development of information technologies in Uzbekistan².

B. G. Kremin, pointing to the informatization of the educational process as the main direction of improving the effectiveness of education at the present stage of society development, emphasizes the importance of ICT in education Y. Vdovychin and A. V. Yatsyshyn³ note that the informatization of education is associated with the creation of an open educational environment and the means and technologies of its formation, which is an important component of the development of modern society.

T.I. Koval, S.O. Sysoeva and L.P. Sushchenko "emphasized the need to create a global international educational environment, the process of which requires a unified technological strategy from each country. Otherwise there will be a lot of repetition of information and fragmentation of actions between educational institutions V.Yu.Bykov, in turn, defines cloud technologies as the main direction of further development of informatization of the education system of Uzbekistan. He describes the Internet as a key tool that deepens democratic ties and strengthens competitive relations between members of the open electronic society⁴.

These studies show the need to integrate Uzbekistan into the global educational community and the need to understand the latest trends in ICT development and develop ways to apply them in the national education system.

Modern trends in the introduction of modern information and communication technologies (ICT) in educational practice is a process that is developing worldwide. This article considers the main theoretical and practical aspects of ICT use in education. In particular, our analysis V.Y. It is carried out on the basis of a collective monograph edited by Bykov, where psychological and pedagogical processes of supporting the creation of educational information space are considered.

According to our analysis, the experience of specific countries and their integration into educational programs is studied. In particular, a study conducted by the Eurydice network in 2011 collected information about the use of ICT in European schools and their integration into educational programs. This study shows how ICT can be integrated into educational processes and how it can contribute to the development of educational programs. The results of the study show that by integrating ICT into the educational process, students can develop personally and professionally.

¹ Information and Communication Technologies in Education: A Curriculum for Schools and a Program of Teacher Development. - UNESCO, 2002. - 152 c. [Electronic resource] . - Access mode: <http://unesdoc.unesco.org/images/0012/001295/129538e.pdf>

² Bikov V.Y. Khmarnykh obrazovannyh-providnyh information technologies of additional development of informatization of lighting systems in Ukraine / V.Y. Bikov // Computers and school cable. - 2011. (1). - C. 3-11.

³ Kremin V.G. Informatizatsiya osviti - providing a direct increase in the effectiveness of the primary process / V. G. Kremin // Computers and school. - 2011. (1). - C. 3-6.

⁴ Koval T.N. Koval T.N. Preparativ vkladachev higher school: information technology and pedagogical activity: Navch.-method. Posibnik / T.N. Koval, S.O. Sysoeva, L.P. Sushchenko. - K.: Vid. center KNLU, 2009. - 380 c.

In addition, the introduction of ICT into education has been greatly influenced by previous international events, including the 2003 Geneva Summit on the Information Society and the 2007 UN Summit on the Informatization of Education in Tunisia. The Australian case study examines how national plans for computerization of education have been developed and implemented. Australia has implemented specific measures to actively introduce ICT in educational institutions as part of a national plan adopted in 1983. These measures included organizing weekly computer classes for schoolchildren and providing professional development opportunities for educators to improve computer literacy. As a result, Australia has revolutionized digital education by effectively integrating ICT into its education system, a process that has been instrumental in improving the quality of education. This experience is a valuable resource for better understanding global trends in the use of ICT in education.

RESULTS

Japan deserves special attention in the implementation of ICT in education, as it published the first report of the National Education Reform Council on the importance of ICT in education in 1985. In this report, the use of ICT in education was recognized as important, and in the following years, many policy documents were adopted in this direction. These include documents such as “Japan's e-strategy” and “New IT Reform”.

However, despite its high technological and intellectual potential, Japan has made less progress in applying ICT in education than European countries and is losing international competitiveness. Children in Japan have the ability to find and retrieve information quickly, but they find it difficult to interpret information correctly and relate it to their personal knowledge. Therefore, Japan needs to develop a new ICT strategy to meet the demands of the 21st century and make education more interactive and comprehensible.

Among UNESCO's main priorities in education is the development and implementation of education informatization policies. The “Guide to Measuring Information and Communication Technologies (ICTs) in Education”, developed by UNESCO, describes the basic principles of the countries of the world for informatization of education. Among these principles there are such issues as solving global problems in education, balanced use of old and new technologies, the need to invest large sums of money to solve international educational tasks by 2015.

In the models developed by J. Anderson and T. Van Wert, educational institutions go through the process of ICT implementation in stages, each stage of this process has its own peculiarities. The essence of these models is to provide educational institutions with clear recommendations and methodologies that can be used in the effective implementation of ICT. These models reflect different levels of ICT integration into the educational process, from initial to full transformation.

Thus, the experience of Japan and other countries, as well as UNESCO's recommendations, are valuable sources for understanding global trends in the integration of ICT into modern educational practices. These trends are aimed at improving educational systems and changing teaching and learning processes with the help of modern technologies.

As a result of the analysis of world publications on informatization of education and development of information society, several main trends have been identified. One of them is the understanding of ICT competence as a key tool for acquiring other life skills. It is important to ensure equal access to computer technology and information on the Internet for all segments of the population. Free access to information resources for every member of society and participation in the information society are also important aspects.

CONCLUSION

Looking at the example of Japan, although the country has a high technical and intellectual capacity to use ICT in education, it has made less progress than European countries. Therefore, there is a need to develop a new ICT strategy in Japan to meet the requirements of the 21st century. This strategy aims to make education more interactive and comprehensible, reduce the burden on teachers, and increase the information competence of students.

By supporting ICT in education, UNESCO is helping countries to develop policies and strategies to reform their systems. Ways to introduce and further improve models for assessing the state of informatization of educational institutions at different levels will be considered in further research. It is also planned to study European standards of Internet management, develop and test software tools for the integration of information and educational space.

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