MODERN INNOVATIVE TECHNOLOGIES AS A PROCESS OF IMPROVING THE QUALITY OF EDUCATION FOR STUDENTS OF HIGH SCHOOLS

Abstract. Rapid changes in economic, social and cultural conditions occurring in modern society necessitate the education of the young generation, which is able to meet the requirements of society in the 21st century. The uncertainty and changeability of the future requires specialists who are able to quickly adapt, adapt, independently and responsibly make decisions oriented towards success and self-improvement. In this regard, in the process of modernization of the state education system, the need to create a human-centered educational environment is growing. A necessary condition for the implementation of the modern educational paradigm is the creation of a special space of life in which each student is aware of the importance of his own educational and cognitive activities, the experience he acquires, evaluates their importance and is oriented towards achieving success. The main condition for an effective "non-destructive" conversion is to maintain in working condition that part of the scientific and technical potential of higher education institutions of Ukraine, which must be preserved to ensure the country's development. To eliminate the technical backlog, first of all, a scientific basis is necessary - fundamental research, in which the scientists of higher educational institutions are especially strong due to their high qualifications. In this regard, a certain part of the work of the scientific teams of the ZVO is aimed at conducting fundamental and exploratory research, the development of high technologies and dual-use technologies, and the creation of a scientific department. The desire to achieve success, which dominates the student's mind, can also be considered as the basis of his self-realization. Humanization of the education system, the transition from authoritarian-directive pedagogy to person-oriented learning and upbringing, the personification of the educational process declares the child with his individual needs, abilities and capabilities as the center of education. Achieving success in a modern educational institution involves the creation of favorable conditions that would form the necessary personal qualities, develop the student's inner and spiritual world, contribute to the formation of his self-awareness, self-determination,
self-realization and self-affirmation. In connection with this, the technology of creating a situation of success and the ways of its implementation are of great interest. The main categories of the pedagogy of success and the technology of creating a situation of success, in particular, are the concepts of "success", "situation of success", "achievement of success".

**Keywords:** innovative technologies, higher education institutions, students, educational environment, young generation.

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**СУЧАСНІ ІННОВАЦІЙНІ ТЕХНОЛОГІЇ ЯК ПРОЦЕС ПІДВИЩЕННЯ ЯКОСТІ ОСВІТИ В СТУДЕНТІВ ЗВО**

**Анотація.** Стрімкі зміни економічних, соціальних та культурних умов, що відбуваються в сучасному суспільстві, зумовлюють необхідність виховання молодого покоління, що проможе відповідати вимогам суспільства XXI століття. Невизначеність та мінливість майбутнього потребує фахівців, здатних швидко адаптуватися, пристосовуватися, самостійно та відповідально приймати рішення, зорієнтованих на успіх та самовдосконалення. У зв’язку з цим у процесі модернізації державної системи освіти зростає необхідність формування людиноцентричного освітнього середовища. Необхідною умовою реалізації сучасної освітньої парадигми є створення особливої середовища, в якому кожен учень зрозуміліс в розуміння зокрема суспільства, де ставає відповідальною необхідність зберегти для забезпечення розвитку країни. Для ліквідації технічного відставання необхідний, наука, науковий базис – фундаментальні дослідження, у чому особливо сильні в силу своєї високої кваліфікації вчений ЗВО. У зв’язку із цим певна частина робіт наукових колективів ЗВО спрямована на проведення фундаментальних і пошукових досліджень, розробку високих технологій, та технологій подвійного застосування, створення наукового заділу. Прагнення до досягнення успіху, що домінує у свідомості студента, можна розглядати також у як основу його самореалізації. Гуманізація системи освіти, перехід від авторитарно-директивної педагогіки до особистісно зорієнтованого навчання та виховання, персонифікація освітнього процесу декларує центром освіти дитину з її індивідуальними потребами, здібностями та можливостями. Досягнення успіху
у сучасному закладі освіти передбачає створення сприятливих умов, які б формували необхідні особистісні якості, розвивали внутрішній, духовний світ учня сприяли становленню його самосвідомості, самовизначення, самореалізації та самоствердження. У зв’язку з чим неабиякий інтерес викликає технологія створення ситуації успіху та шляхи її реалізації. Основними категоріями педагогіки успіху та технології створення ситуації успіху, зокрема, є поняття «успіх», «ситуація успіху», «досягнення успіху».

**Ключові слова:** інноваційні технології, ЗВО, студенти, освітнє середовище, молоде покоління.

**Formulation of the problem.** Informatization of society is a global social process, the peculiarity of which is that the dominant type of activity in the sphere of social production is the collection, accumulation, production, processing, storage, transmission and use of information [6, p.175].

Informatization of society, as emphasized in modern literature, provides:

- active use of intellectual potential, constantly expanding, concentrated in the printed fund, scientific, industrial and other activities of its members;
- integration of information technologies with scientific, industrial, initiating development of all spheres of social production, intellectualization of labor activity;
- high level of information service, accessibility of any member of society to sources of reliable information, visualization of the presented information, truthfulness of the data used. The emergence and development of the information society (IS) implies the wide application of innovative technologies (IT) in education, which is determined by many factors.

First, the introduction of IT into modern education significantly accelerates the transfer of knowledge and the accumulated technological and social experience of mankind not only from generation to generation, but also from one person to another.

Secondly, modern IT, increasing the quality of training and education, enables a person to more successfully and quickly adapt to the environment, to social changes. This gives every person the opportunity to obtain the necessary knowledge both today and in the post-industrial society.

Thirdly, the active and effective implementation of these technologies in education is an important factor in the creation of a new education system that meets the requirements of IS and the process of modernization of the traditional education system [6, p.172].

The importance and necessity of implementing IT in education is substantiated by international experts and scientists. IT affects all spheres of human activity, but, perhaps, they have the strongest positive impact on education, as they open up opportunities to introduce completely new methods of teaching and learning [6, p. 173].

**Analysis of recent research and publications.** According to the studies of scientists, the main directions of the formation of a promising education system,
which are of fundamental importance for Ukraine, which is currently at the stage of complex economic transformations, are the following:

- Improving the quality of education through its fundamentalization, informing pupils and students about the modern achievements of science in a larger volume and at a faster pace;
- Ensuring the orientation of training on new IS technologies and, first of all, on IT;
- Ensuring greater access to education for various segments of the population;
- Increasing the creative potential of education [7, p. 7].

One of the important areas of development of informatization of education is new innovative technologies. Interactivity, intensification of the learning process, feedback are notable advantages of these technologies, which necessitated their use in various fields of human activity, primarily in those related to education and professional training. Currently, the number of studies, the subject of which has become the use of information and communication technologies in the educational process, has increased significantly. This topic in Ukraine is devoted to the research of scientists such as V. Bykov, Ya. Bulakhova, O. Bondarenko, V. Zabolotnyi, G. Kozlakova, O. Mishchenko, O. Pinchuk, O. Shestopal and others [5, p. 8].

The purpose of the article is the preservation and development of Ukrainian science and the creation of a coherent system of its state support, a rather long process. At the initial stage of this process, the task of forming the most important elements of the system of state support for the development of scientific and technical activity is the most urgent.

Presenting main material. The introduction of the computer into the field of education was the beginning of a revolutionary transformation of traditional methods and technologies of learning and the entire field of education. An important role at this stage, in addition to computers, is played by the following IT: telephone means of communication, television, space communications, which are mainly used in the process of managing the learning process and additional learning systems [3, p. 264].

The emergence of modern telecommunication networks and their integration with information technologies, i.e. the emergence of IT, became a new stage in the global technologization of advanced countries. They became the basis for the creation of an unprecedented infosphere, since the combination of computer systems and global telecommunication networks made possible the creation and development of the planetary infrastructure that now connects all of humanity.

An example of successful implementation of IT was the emergence of the Internet - a global computer network with its practically unlimited possibilities of collecting and saving information, transferring it individually to each user [2].

The Internet quickly found application in science, education, communication, mass media, including television, in advertising, trade, as well as in other areas of human activity. The first steps in introducing the Internet into the education system
showed its enormous potential for its development. At the same time, they found difficulties that must be overcome for everyday use of the network in educational institutions. However, it must be taken into account that this requires significant costs for the organization of training compared to traditional technologies, which is associated with the need to use a significant number of technical (computers, modems, etc.), software (support for learning technologies), as well as the preparation of additional organizational methodical assistance (special instructions for students and teachers), new textbooks and study guides. Currently, there is an accumulation of experience, a search for ways to improve the quality of education and new forms of using IT in various educational processes. Certain difficulties in the use of IT in education arise due to the lack of not only a methodological basis for their use, but also a methodology for the development of IT for education, which forces the teacher in practice to focus only on his own experience and the ability to empirically search for ways of effective application of information technologies [1, p. 35].

Educational technologies (ET) are one of the main elements of the education system, as they are directly aimed at achieving the main goals: learning and education. OT is understood as the implementation of educational plans and educational programs, as well as the transfer of a system of knowledge to a pupil, student, as well as the use of methods and tools for creating, collecting, transmitting, saving and processing information in a specific field. Science has accumulated enormous experience in the transfer of knowledge from a teacher to a student, the creation of education and training technologies, as well as in the construction of their models.

IT exerts an active influence on the process of education and education of students, as it changes the scheme of knowledge transfer and teaching methods. At the same time, the introduction of IT into the education system not only affects educational technologies, but also introduces new ones into the education process. They are also related to the creation of new means of learning and preserving knowledge, which include electronic textbooks and multimedia; electronic libraries and archives, global and local educational networks; information-search and information-reference systems.

Improvement of the education system, based on information technologies, the wide introduction of IT into the educational process led to the emergence of virtual universities, an open education system [4, p. 103].

The implementation of open education can be carried out at the expense of distance education (DO), which is considered as a type of educational system in which distance learning technologies and the organization of the educational process are mainly used, or as one of the forms of obtaining education, according to which mastering one or another of its levels or another specialty is carried out in the process of distance learning.

Distance education involves the implementation of a new form of education that is open and accessible to everyone, regardless of where a person lives [1, p.2]
For the practical implementation of distance learning, specialized information systems are mostly used, which are called learning management systems (LMS) or sometimes - program and pedagogical systems. As a rule, such information systems consist of sets of modules that provide full distance learning. However, more and more educational institutions prefer significant systems that have already been tested in practice [7, p. 6].

The analysis of the processes taking place in domestic education shows that traditional views on education are constantly changing in Ukraine as well, which makes it possible to provide effective training under the condition of widespread use of new IT. IT-based vocational school does not have a rigid calendar plan of the educational process; the student can implement it according to his abilities and capabilities. This increases the quality of education and provides additional emotional and intellectual stimuli for education.

The analyzing problems of using IT in education, it is necessary first to activate the process of introducing IT into the education system, providing educational institutions with computer equipment, developing telecommunications, global and local educational networks [7, p. 2].

Informatization of society is connected, first, with the development of computer technology, various software, global networks (Internet) and multimedia technologies.

Multimedia learning tools occupy an important place in the development of the information society. Multimedia teaching aids according to S. Honcharenko. Is a set of hardware and software tools that allow the user to communicate with the computer using various natural environments: graphics, hypertexts, sound, animation and video. Multimedia systems provide the user of a personal computer with the following types of information: text; image; animated pictures; audio comments; digital video. Technologies that allow using a computer to integrate process and at the same time reproduce various types of signals, various environments, means and methods of information exchange are called multimedia [4, 298].

There are various ways of using multimedia tools in the educational process, including:

- use of electronic lecturers, simulators, textbooks, encyclopedias;
- development of situational role-playing and intellectual games using artificial intelligence;
- modeling of processes and phenomena;
- provision of distance education;
- conducting interactive educational teleconferences;
- construction of systems of control and verification of students' knowledge and skills (use of control test programs);
- creation and support of sites of educational institutions;
- creating presentations of educational material;
- implementation of projective and research activities of students,

etc. [7, p. 8].
It should be emphasized that the use of multimedia in the educational process contributes to:

- increasing students' motivation to study;
- implementation of a social goal, namely, informationalization of society;
- intensification of the learning process;
- student personality development;
- development of skills of independent work with educational material;
- increasing the effectiveness of training due to its individualization [2, 348].

Therefore, the use of innovative technologies in education led to the emergence of a new generation of information and educational technologies that made it possible to improve the quality of education, create new means of influence, and interact more effectively between teachers and students. According to many experts, new educational technologies based on computer tools provide an opportunity to significantly increase the effectiveness of education.

**Conclusions.** We can determine that innovative learning technologies, in the context of modern research, are, first of all, an orientation to the learning process, personal achievements of students, a clear definition of lesson tasks, the use of active and interactive learning methods, a connection with previously studied and the student's own experience, forming in students the ability to independently acquire knowledge and apply it in practice, that is, to form a competent, creative and critical thinking personality. As experience shows, attempts are already being made to implement blended learning in Ukraine. Such a system gives advantages by changing the roles of the teacher and students, motivates them to learn and improve their skills. Various projects demonstrate the effectiveness of this model for all participants of the educational process. We think that blended learning is primarily an active environment for information exchange, it is the right to autonomy (individual way of studying a topic), it is personalized learning of the subject (student), guided by his own preferences and clear criteria for evaluating educational achievements. So, the format of modern education is in active motion, which creates opportunities for the introduction of various forms of education and the use of effective educational technologies, and the teacher's strategy for using educational technologies is to create a model of successful education for each student.

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