Application Of Smart-Technologies In The Modern Educational Process

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Summary

In the framework of this article the current state of the educational process with the use of smart technologies was considered. It is stated that elements of smart systems are currently being actively introduced into the content of the educational process. This trend allowed us to talk about the emergence of a new stage in the introduction of smart technologies in education, the transition to its state of smart education. Problems and tendencies of development of educational technologies in the epoch of smart education and media informatization are also considered. The purpose of the study is technologies according to their purpose and specification. The research is conducted within the framework of the system-information approach and its implementations applied to the media environment and the cyberspace of education. Educational technologies appear in this article as knowledge, abstract models, abstract processes, educational resources.

Keywords:

Smart education, Learning technologies, Teacher, Student

1. Introduction

The modern world is characterized by a state of constant systemic global change. The role of information communications, products and services in the socio-economic and cultural life of man is growing. The breakthrough in the development of information and system technologies has identified profound, meaningful transformations in all spheres of human life. Now there is every reason to believe that the information society is undergoing an evolutionary transformation and moving to a new level - smart-society. It is assumed that in the smart-society there is a transition from the traditional model of learning to e-learning, and then - to smart-education.

Today, the field of technology is developing with incredible speed. More and more innovations are applied not only to the production of various goods, but also to the provision of services. In the last five years, the issue of using smart technologies in the educational process of Ukraine is quite relevant. However, most countries are already actively using them. Modern society is gradually transforming into a smart-society (smart-society), as noted by sociologists, philosophers, IT professionals, educators and more. This concept means a new quality of society in which the combination of trained people with technical means, services and the Internet leads to qualitative changes in the interaction of actors, which allows to obtain new effects - social, economic and other benefits for a better life.

2. Theoretical Consideration

The processes of development of the information society have an active impact on all aspects of life of the state, society, individual. Such a direction as informatization of education is present in all national programs of the movement to the information society without exception. In modern universities, informatization is conducted in two main interrelated areas [1]. The first direction is the computerization of the educational process, the use of modern information technologies to modernize the pedagogical process. In recent years, we have witnessed the development of several educational paradigms, which are based on the widespread use of information technology: distance learning (distance learning), e-learning (e-learning), mobile learning (m-learning), comprehensive learning (u-learning)). Modernization of the educational process on the basis of information technology is due both to the new requirements for the modern education system and the transformation of computer technology and the Internet into common everyday tools for obtaining and processing information. This direction is implemented through the integration into the information environment of

the university of electronic learning tools, including electronic educational resources, as well as software platforms for learning management systems (LMS - Learning Management Systems) and electronic libraries [2, 3]. The second direction is the computerization of the university management system by automating the business processes of a modern university. This direction is important and relevant, as it aims to improve (or at least maintain) the quality of educational and scientific process in the transition to mass higher education, as well as to reduce material costs for the organization of the university. This area is associated with the development and implementation of specialized software platforms for computerization of educational and scientific processes. A modern university is an open, mobile, innovative creative, entrepreneurial, competitive, socially responsible developing university. Modern conditions require the formation of a new paradigm and concept.

The introduction of information and communication technologies in the educational process, the creation and use of multimedia tools is moving to the virtual plane. E-learning and multimedia technologies activate the cognitive process, provide an opportunity to visualize educational material [4].

SMART-education is such an educational paradigm that provides for the adaptive implementation of the educational process, possible through the use of information SMART-technologies. The implementation of the SMART-education paradigm is aimed at forming the process of learning and education for the acquisition of knowledge, skills, abilities and competencies necessary for flexible and adaptive interaction with the changing social, economic and technological environment. SMART education should provide an opportunity to take advantage of the global information society to meet educational needs and interests.

The basic principles of SMART education include:
• Use of up-to-date information in the educational program to solve educational tasks: the speed and volume of information flow in education and any professional activity is growing rapidly, existing educational materials must be supplemented with real-time information to prepare students for practical tasks.
• Organization of independent cognitive, research, project activities of students. This principle is dominant in preparing children for the creative search for solutions to problems, independent information and research activities.
• Implementation of the learning process in a distributed learning environment. The educational environment should not be limited to the territory of the educational institution

or the boundaries of the distance learning system. The learning process must be continuous.
• Flexible educational trajectories, individualization of learning. The diversity of educational activities requires the provision of broad opportunities for students to study educational programs and courses, the use of tools in the educational process in accordance with their health capabilities, material and social conditions.

Education is one of the areas that is rapidly updating, both in terms of content and in terms of technology and teaching methods. The development of smart technologies and the intensity of their penetration into everyday life makes changes in the way we learn, learn, work, how we live. A new generation is emerging for which smart devices and gadgets: smartphones, iPads, tablets and ultrabooks using "advanced" technologies have become mandatory elements of living space. There is no doubt that our time is the time of Smart, which implies a willingness to constantly change and adapt to the world around us, meeting the requirements of the economy and society. How smart and fast we do it depends on whether smart technologies can become a tool to achieve our future.

What is Smart Education?

Smart Education is an interactive learning environment based on the use of mobile devices with content from around the world, which is freely available regardless of time and space. It supports the needs of students and teachers.

S - Self-Drected - self-directed,
M - Motivated - motivating,
A - Adaptive - Adapted to yourself
R - Resource - Free source
T - Technology Embedded - complete with technology [7].

Smart Education is a concept that involves the comprehensive modernization of all educational processes, as well as methods and technologies used in these processes. The concept of Smart in the educational context entails the emergence of technologies such as smart boards, smart screens, Internet access from anywhere. Each of these technologies allows you to rebuild the process of content development, delivery and updating. Learning becomes possible not only in the classroom, but also at home and in any place: public places, such as museums or cafes. The main element that connects the educational process is active educational content, which creates a single repository, allow you to remove the temporal and spatial framework.

Widespread SMART-learning is associated, first, with the improvement of Internet technology. Second, with the development of wireless technologies such as Wi-Fi, 3G, 4G, and, thirdly, the widespread use of online interactive learning resources. The development of Smart Education

was also based on the development of Web 2.0 technologies, such as Facebook, YouTube, Twitter and blogs, which allow people to create their own online content [5].

The pedagogical aspect of technology is related to pedagogy, scientific and pedagogical research or practical pedagogical activities. On the one hand, pedagogy is included in the educational sphere, which is generated by the educational process and educational interaction, is an educational institution. On the other hand, education is the subject of pedagogy as a complex of scientific and methodological and methodological systems, pedagogical metasystem. Therefore, the pedagogical activity itself (theoretical and practical) is subject to the general theory of pedagogy, is carried out in accordance with its universal knowledge and development trends, including information and communication. As a result, pedagogical technologies play a decisive, strategic role in the field of education and educational technologies. They are used in determining the content of education, the structure of the educational sphere, in defining and implementing methodology and education and basic subject-oriented methodological approaches, in the development of subject scientific and methodological systems. Pedagogical technology is an abstract representation of the implementation of methodology and methods of pedagogy in the field of educational interaction. This is a universal structured model of educational activity that meets its goals and methods of achieving them, abstract educational interaction [8].

There are special providers that specialize in "smart education". Smart Education Co. Ltd. - a leading provider in China of innovative and high quality educational services (training programs in English, Chinese and mathematics). Collaboration with major reputable publishers, such as Cambridge University Press, Macmillan, etc., aims to address the quality of materials provided in the open. There are programs for students, their parents and teachers. Preparation for international exams, etc. "UK Smart Education" company also specializes in smart technologies in education (Manchester). The company's main idea is to provide students with the best possible online educational environment using smart education with interactive technologies. The goal is to make university education accessible to all (local and international students). Smart education will develop at a rapid pace, according to experts. This is a new trend in 21st century education. According to the study, computer training programs are popular and accessible in the practice of modern higher education institutions [6].

For example, foreign students mastering the Ukrainian language (professionally), can use in the context of modern education and self-education National Platform for Ukrainian Language for English-speaking people "SpeakUkraine", students learn basic concepts of the course, realize the importance of the state language in professional communication. basics of professional language of the employee and mastering the rules of concluding documents. Students master the skills of: identifying the specifics of the functioning of oral and written forms of business language in accordance with the specialty; application of lexical and grammatical category of modern Ukrainian literary language to develop optimal language behavior in the professional sphere, mastering terminological vocabulary, skills of working with specialized dictionaries, analysis of the feasibility of lexical, morphological, syntactic language tools in accordance with communicative intentions; use of oral and written norms of speech etiquette in the professional activity of the employee; free mastery of vocabulary and terminology of their specialty, editing and analysis of professional texts in accordance with the norms of modern literary Ukrainian language, avoiding violations of stylistic norms in compiling business and professional texts, distinguishing terms and nomenclature names, using established language structures of official business style , use of words of foreign origin and selection of Ukrainian equivalents to them when compiling professional documentation, as well as editing translated texts.

Learning goes beyond the classroom, and if it takes place in it, it must be organized with the help of really modern technologies and tools. The whole online environment is involved, including social networks. However, there are a huge number of language resources on social networks both on the pages of specialists and on special thematic, group pages. Video, film, and audio resources are in the usual search environment for most students. You can create your own group and teach assignments, links to movies, videos, audiobooks, chats, etc. An interesting source for learning and communicating with an expert - blogs. Thus, we can conclude that in the field of education, as in any other field, there are significant transformations. need to change. Students live in a world of technology. And only technology can help keep their attention. Interactive learning fascinates students, as they actively work with dynamic content that provides skills to work with huge resources.

Thus, such programs with the use of audio and video files will promote the formation and development of auditory and rhythmic-intonation skills, activation of cognitive activity of students, because the combination of auditory and visual information provides perception and understanding of new speech.

Conclusions

The use of modern smart-technologies in the educational process is not only a means of activating the cognitive and creative activities of students, but also objectively due to the rapid development of science and technology, which requires detailed study, development of methods, forms, techniques technologies and their implementation. Training of qualified specialists in the field of smart education will allow Ukraine to compete with other countries and produce products that will be used not only in teaching and education, but also in other spheres of society. Paying enough attention to the technologies of the future and proper financial support of smart technology will allow Ukraine to reach a new level of development. This is obviously about the need to raise awareness of all participants in educational activities with smart technologies. One of the possible variants of this may be the introduction of some additional courses in the learning process, which could eliminate or minimize the selected shortcomings, increase the level of preparedness of the audience for the use of smart technologies. At the same time, the respondents noted a number of advantages of smart technologies, which create a bridgehead for their wide and intensive use. Among which are time savings, clarity, etc. In conclusion, we can say that the analysis of the practice of using smart technologies in universities, which we are now just at the beginning. For many participants in the educational process, the advantages of using smart technologies are far from obvious. The degree of their awareness leaves much to be desired. However, the technologies themselves, which are used in domestic universities, are far from perfect, reducing their value for real and potential users.

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