SMART-technologies as a factor of building modern society

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Abstract. The article is devoted to the role of SMART technologies in the modern society. The article discusses the challenges facing modern society and education, the introduction of modern "smart" systems, their role in the development in pedagogy, methodology, natural science, distance and online learning, teaching methods of informatics. There is no doubt that our time is the Smart time. The development of smart technologies is almost like an avalanche. Just yesterday, a new quality of life for us was personified by "smart" houses, where equipment and systems in automatic mode, without human intervention, serve the daily needs of individual families living in them. The article also provides information on SMART education.

Keywords: education, modern society, SMART education, SMART technologies.

Intriduction. Today, the most important trend has become the creation of smart cities that will completely free the population from social and communal problems: traffic jams, queues, energy dependence and lack of control of urban structures. Today our houses, cars, money have become "smart". By itself, this concept today does not mean cozy zones of everyday comfort, but our readiness to constantly change and adapt to the world around us, responding to the demands of the economy and society. How quickly we do it depends on whether smart technologies can become a tool for achieving our future.

Literature review. A number of scientists in our country and around the world have conducted research on SMART-education, and technologies, technologicalization of the educational process, A.Abdukodirov [1], Agranovich BL, Yakushkina EI, Novikova AA. [2], Aletdinova A.A., Melnichenko A.A. [3], Borisenko I. G. [4], Dneprovskaya N.V., Yankovskaya E.A., Shevtsova I.V. [5], Karmanov A.M. [6], Nesterov A.V. [7], Pollak G.A. [8], Telnov Yu.F., Ipatova E.R. [9], Shiryay A. V. [10], Nakashima H., Aghajan H., Augusto J. C. [11], Makhmudova D.M., Tadjibaev B.R., Dusmurodova G.Kh. [12], Mukhamedov G.I., Makhmudova D.M. [13], Makhmudova D.M. [14] U. Aripova's research is one of them.

Research Methodology. Smart technology involves the use of computer systems and microprocessors to perform daily tasks and exchange information.

Translated from English "smart" means "smart" with a tinge of "cunning", "savvy". In our case, this word is an abbreviation that was introduced by Peter Drucker in 1954. SMART contains 5 criteria for setting goals:

• "specific" - explains what exactly needs to be achieved;

• "measurable" - explains how the result will be measured;

• "achievable" - explains how the goal is planned to be achieved;

• "relevant" —defines the truth of the target. Whether the completion of this task will really achieve the goal;

• "time-bound" (limited in time) - determination of the time interval after which the goal must be

achieved.

Tomorrow - as futurologists do not doubt - smart technologies will finally penetrate into all spheres of human activity, radically changing the direction of social development, rapidly bringing us closer to smart - society.

Smart-society is a new quality of society, in which the combination of the use of technical means, services and the Internet by trained people leads to qualitative changes in the interaction of subjects, allowing to obtain new effects - social, economic and other benefits for a better life. This is the next stage of development for the so-called. The "information society" in which we live today.

In the smart society, as the founding fathers of this popular concept describe it, the growth of accessibility and openness of information resources and communication means, along with the development of Internet technologies, radically changes all elements of the social paradigm: economy, social policy, education, labor relations.

Smart-economy is based on high, including energy-saving technologies and "ecological" infrastructure. In the "network" economy, a new quality of services is being formed: they are generated by users themselves, citizens of a smart society, interacting with government bodies and private business not along vertical, but through horizontal links. This provides for a "fifth level service", when the service itself "finds" the client, and not vice versa. The use of ICT allows enterprises to achieve significant economic success through rapid adaptation to a changing business environment, the use of remote offices, continuous Internet communication with consumers and partners.

In the context of smart politics, for the first time, citizens have the opportunity to participate in the formation and implementation of plans for the development of their cities and regions, and to influence government decisions. The availability and openness of any information resources ensures complete transparency - and, therefore, controllability by citizens of any government authorities.

It is assumed that in a smart society there is a transition from the traditional model of education to e-learning, and then to smart-education. At the same time, the role of educational institutions, which are called upon not to "supply knowledge", but to create the best conditions for students to acquire their own experience and skills, is also changing. In this regard, the main function of the teacher is not broadcasting "ready-made truths", but high-quality navigation on ICT and world information resources.

Analysis and results. The main idea of Smart education is the process of developing approaches to education. It can be conditionally divided into three stages and considered in the context of five visions, such as knowledge, technology, teaching, teacher and business.

"Yesterday" the only source of knowledge for the student was the teacher, while the student could not acquire new knowledge anywhere except in the classroom or in a book that was advised by the same teacher. The goal of the universities was to train specialists for industrial production.

"Today" knowledge is transferred not only from teacher to student, but also between students, which allows you to create a new level of knowledge. In turn, educational technologies are being actively used and teachers can carry knowledge not only in the classroom. Businesses need specialists trained for the knowledge society.

And "tomorrow" the Internet will become the main source of knowledge for the student, technologies will be individually oriented and directed to the creation of new knowledge. The teaching process will involve the movement of knowledge objects in any direction from student to teacher and back, from student to student, etc. The graduate will not only be a specialist in his field, he will be able

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to join the business environment as a partner or entrepreneur.

During the past decade, a digital society has been actively forming with such attributes as the knowledge economy, e-army, e-culture, e-health, e-government, e-science. E-learning is implanted into the structure of the digital society and is its central, backbone element. However, when talking about e-learning, the emphasis was mainly on technology. Today, the technological development of the world's leading universities has reached such a limit when further development of the information base will not bring a qualitatively new change. E-learning is no longer an innovation; there are no ambiguous positions in it. Freely accessible educational content for students, providing feedback from teachers and students, exchanging knowledge between them, automating administrative tasks - all this refers to technology. But what's next? What are people doing with these technologies, what effect are they getting? These questions are already in the context of Smart education. It is precisely this that is able to provide the highest level of education corresponding to the tasks and opportunities of today's world, will allow young people to adapt in a rapidly changing environment, will ensure the transition from book content to active.

Smart education is an association of educational institutions and faculty to carry out joint educational activities on the Internet based on common standards, agreements and technologies. That is, we are talking about the joint creation and use of content, about joint learning. An example of this is the project for the next decade in the European education system - the Unified European University with a common dean's office, which will accompany the movement of students from university to university. The Bologna Process gives universities the opportunity to admit students without re-examination, thus creating a Smart education system for Europe. A single European university will carry out a collective learning process through a single common repository of teaching materials.

Conclusion/Recommendations. In modern society, communication channels and means of transmission and exchange of information are developing more and more rapidly. This brings the world to a new "evolutionary round", transforming the information society into what is now commonly called the Smart-society. This strategy is a solution that is considered today at the international level as the only one possible in the modern world.

Over the next ten to twenty years, the following global trends in the creation and use of information and communication technologies can be expected to appear.

1. Intensive development of new information and communication technologies will create the effect of a continuous information revolution.

The continuous information revolution will manifest itself in the regular emergence of new markets in the field of information and communication technologies, with the subsequent movement of capital from traditional markets to them. This process will be accompanied by the destruction of the latter and the collapse of companies based in these markets.

2. The information revolution will create new business models that are dramatically transforming the corporate sector around the world.

3. The information revolution will significantly affect the mechanisms of social governance and create new political players (network communities, etc.). Transition to networked economic structures.

The information revolution will allow market players to operate beyond the reach of national governments. As a result, some traditional governance mechanisms - such as taxation, regulation, licensing - will become less efficient. In a number of areas, governments will have to create new,

including international, governance structures in order to maintain control over the economic space of their countries.

4. Intellectual property and rights to new digital products and services will create new areas of tension in interstate relations.

There is no doubt that our time is the Smart time. Today this concept does not mean cozy zones of everyday comfort, but our readiness to constantly change and adapt to the world around us, responding to the demands of the economy and society. Whether smart technologies can become a tool for achieving our future depends on how quickly and quickly we do it.

We can also say that Smart education, or smart learning, is flexible learning in an interactive educational environment with the help of freely available content from around the world. The key to understanding Smart education is the wide availability of knowledge.

In turn, the goal of smart learning is to make the learning process most effective by transferring the educational process to an electronic environment. It is this approach that will allow you to copy the teacher's knowledge and provide access to it to everyone. Moreover, this will expand the boundaries of learning, not only in terms of the number of learners, but also in terms of temporal and spatial indicators: Learning will become available everywhere and always. One of the conditions for the transition to smart e-learning is the transition from book content to active content. Only knowledge in electronic form can be transferred with the greatest efficiency. In this case, knowledge should be located in a single repository, which presupposes the presence of an intelligent search system. And simply placing content in such a repository is not enough to make it active. All knowledge objects should be interconnected by a metadata system.

In turn, the quality in the repository must be constantly monitored through the introduction of systems such as e-metrics, and work in a unified connection with educational process management systems.

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