THE ROLE OF INFORMATION TECHNOLOGY IN THE DEVELOPMENT OF MODERN INFORMATION SYSTEMS IN THE PROCESS OF FORMATION OF THE INFORMATION SOCIETY

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Annotation. *This article discusses the importance of the role of information technology in the development of modern information systems in the process of forming the information society.*

Key words: *telecommunications, technology, communications, information, information society, information products, scientific and technical development, information technology, information systems.*

We all know that the current stage of human development cannot be imagined without the participation of communication, information and telecommunication technologies. Today, information systems are formed in all spheres and areas of life, and when the time comes, information reserves, which

are the most valuable strategic resource, are managed and used within and through these systems.

Informatization of the manufacturing industries of our country is a natural continuation of the objective process of development of society and the collection, storage, transmission, processing and presentation of the necessary information. Improving the quality of work, productivity and efficiency in the fields of economics, production, communications, scientific research, education, medicine and business is associated with the most modern information and communication technologies used in them.

Modern information and communication technologies deliver collected information products to people at a rapid pace, while simultaneously reducing the level of labor, creating ample opportunities to solve existing problems.

In this regard, I.A. Karimov noted: "Today, the use of the Internet and other global information systems is especially important in the process of forming a national information system. Achieving this will be crucial for the country's development in the 21st century," he said.

The information society creates an excellent basis for economic, scientific and technological progress, the quality of products produced in the country and increasing labor productivity, improving economic management at the macro and micro levels, and developing promising areas of scientific research. The creation of such a society is closely related to the achievements of scientific and technological development, the use of information and communication technologies in advanced areas of production and the creation of materials and raw materials. Information processes serve as the main basis for human development, which is considered the main social productive force of society. It gives people an excellent opportunity to improve their skills in the widespread use of the most modern computer technology and test their inexhaustible abilities in practice.

Arming people with modern technologies that enhance their information processing capabilities is a critical technical, technological and economic task that requires rapid development of the information industry.

Therefore, the formation of a national information system is one of the most pressing tasks of our time and is a main factor in the development of society.

The main criterion for the introduction of information technology should be focused on each person, in any market relations and in public administration. Information technology includes an information system that is used in all spheres of human activity and has an organizational, economic and social structure.

Information systems and technologies are used more and more every year in various spheres of human life. The purpose of their creation, implementation and widespread use is to solve problems of society and inform the entire life of a person.

The large-scale reforms being carried out today in our country require the formation of continuous scientific, practical, spiritual, educational, socio-economic and other educational systems. Training qualified, deeply knowledgeable specialists capable of successfully running a business in market conditions, especially personnel who can widely use information technology, remains a requirement of the time.

In practice, it is important for the head of an organization to know the structure of information systems in his organization. The reason is that existing information systems serve for the uniform functioning of the organization, which means that the structure of information systems must take into account the needs of all structural units of the organization.

In an era of extremely rapid flow of information, feeling the intensity of development, being able to keep up with the achievements and innovations of the time and being able to effectively apply these achievements and innovations in our activities to achieve our goals related to education and science is the key to our future success.

The term information systems consists of words expressing two fundamental concepts - the concepts of information and systems. We define information through information. We know that data is a recorded signal. The individuality and specificity of our ways of receiving, understanding, sensing and perceiving signals allows us to interpret information differently. So, the product of the dynamic interaction of objective information and subjective methods of obtaining it is called information. Briefly: we call the product of interaction between data and methods for obtaining it information.

System is a fundamental concept. A set of interconnected, manageable elements of a certain structure, each of which performs separate tasks, is directed towards a single goal and has a certain structure, is called a system.

The following actions are performed on information: information search, receipt, collection, storage, processing, visualization, transmission (presentation and distribution), destruction.

The process of information visualization involves transferring audible sounds and sounds into audio files, and the reality (landscape, situation, events) before the eyes into video files. In turn, the transfer of information is carried out by its presentation, dissemination, communication and information environment and means. It is known that certain symptoms in individuals are transmitted from generation to generation through hereditary means, information about this is determined through observation and observation, and the process is recognized as a unique transmission of information. Regarding the act of receiving information, information is obtained through hearing, sensing, sensing, seeing, reading, reasoning, remembering, receiving, entering a certain mental state and other various experiences.

We call the actions listed above information procedures on the scale of a specific information process. At this stage, it is noticeable that deleting information is also a separate procedure.

A process is a reality that occurs and lasts over a period of time. The sequence of events and actions is also a process, and the information process, in turn, is a sequence of events and actions associated with information.

Today, the information process that is occurring at a rapid pace throughout the world is the process of informing the world community.

Information relations primarily refer to socio-legal relations associated with information in the social environment.

Information infrastructure is understood as an environment that supports economic, social, everyday or political processes (programs, projects), activities (in particular, production, construction, agricultural or military) and spheres of life from the point of view of information support.

It should be noted that information itself has a number of specific properties in accordance with the existing environment, as well as as an object of research. Properties of information consist of such properties as adequacy, representativeness, relevance, understandability, completeness, accuracy, stability, reliability, significance, relevance, novelty.

Any information infrastructure includes an information system. An information system is a human-machine system, and its functional structure fully corresponds to the definition of the concept of a system. In this case, the complex "a set of information resources, information technologies and means of communication, organized organizationally, ensuring the collection, storage, search, processing and use of information" is called an information system.

In essence, an information system is a complex of interconnected managed elements, each of which performs separate tasks, is aimed at a single goal and has a certain structure, as described above in the definition of the concept of a system. At this stage, we include management personnel as elements of the information system, who organizationally organize other elements, connecting them and directing them towards a common goal. Therefore, we call an information system a human-machine system.

Processes of formation of an informed society. In the new 21st century, the national economies of countries are globalizing and becoming a form of information economy. That is, the role of information and knowledge in the national economy is increasing and they have become a strategic resource. 90% of the information and knowledge accumulated in the world has been created in the last 30 years. The daily increase in the amount of information and knowledge requires the effective use of information and communication technologies in education.

Information, computerization, computing technology, modern information technology, modeling, data source, programming, personal computers, software and other similar scientific concepts represent the most important features of the information society.

Information is a body of knowledge and information that is the result of the development of social, economic and natural sciences, the science of thinking, as well as the body of experience accumulated by people in the course of their practical activities. Since a person lives in a flow of information, he turns to an increasing number of facts and figures in order to analyze, observe and reflect on the relationship of various events, phenomena and processes. Thanks to information, theoretical knowledge is combined with practice.

Modern development of science and technology has led to a significant expansion of information flows. This can be evidenced by the fact that by the mid-70s of the last century, the development of productive forces had reached such a level that for their rational use and acceleration of social production it is necessary to perform 1016 arithmetic operations per 1016 arithmetic operations. year. . Naturally, such a complex calculation cannot be done quickly. 10 billion people will only be able to solve this many arithmetic operations if they work continuously for a year.

With the rational organization and use of information resources, they act as the equivalent of labor, material and energy resources. At the moment,

information is the only type of resource that contributes to the rational and efficient use of all other resources and their conservation.

By the 21st century, for the first time in human history, information became a working tool of production in industrialized countries. The trend of labor resources moving from the material production sector to the information sector is becoming more and more obvious. The main reason for this is that the amount of information required for decision making and management increases as production grows and develops. This growth is manifested primarily in economic, technical, scientific, technical and social systems and processes.

The increase in the volume of information and the underdevelopment of means of processing it make it difficult for a person to have an idea about it and use it. A lot of time is spent searching, sorting and using information. In order for information funds to serve everyone, new, modern tools are needed. Therefore, by the mid-20th century, many people began to work in the field of information processing. Information as a source of knowledge has become a strategic resource of society. The effective use of these resources is associated with the process of informing the public.

The process of informatization means a set of measures taken for the effective use of knowledge in important areas of human activity.

To find modern and effective solutions, many structurally complex information systems are being created, as a result of which the number of participants in the information process is increasing every day. This leads to the attraction of large amounts of public funds and material production sectors into this area. This, in turn, forces people to look for ways to rationally use information resources. In modern conditions, as the flow of new information increases, its obsolescence simultaneously accelerates, which, in turn, creates difficulties in selecting information and obtaining it.

Over the course of their career, every engineer, employee, and manager has to analyze information written on a variety of papers. This has a negative impact on the productivity of the work organization, since a lot of time has to be

spent obtaining information. Effectively solving such problems makes the issue of informing society cross-cutting.

Informatization of society is an organizational socio-economic and scientific-technical process of creating conditions using information resources, information technologies and information systems to meet the information needs of legal entities and individuals. The process of informing the public requires solving the following tasks:

1. Application of computer tools in all sectors of society.

2. Teach members of society to effectively use computer tools.

3. Ensuring the full and effective use of information resources to meet the various needs of members of society.

The information society is a society in which the majority of workers are engaged in the production, storage, processing and sale of information, especially its highest form - knowledge. The specifics of the information society are manifested in the following:

- development of the information economy;
- eliminating information tension;
- achievement of globalization of information technologies;
- free access to various information resources;
- ensuring superiority of information resources;
- widespread use of new information technologies and technologies;
- effective use of information in management activities.

In the information society, a person must have a certain level of information culture to work with information. To do this, it is necessary to teach a person to quickly receive information and process large volumes of it, to use modern tools, methods and technologies.

Information culture means that members of society have the skills to purposefully use information, process and transmit it, and use modern technical and organizational means and methods. The information society is manifested in the following aspects:

• have skills in using technical devices;

• use of computer and information technologies in their activities;

• know how to obtain information from different sources and use it effectively;

• acquiring the basics of analytical information processing;

• know information related to your activities and be able to work with it.

The weight of scientific works of foreign and domestic scientists devoted to the problems of formation and improvement of the information society is not small.

The concept of "informed society" was one of the first to be introduced into the scientific field by the American economist F. Machlup. He studied the position of the patent system in monopolistic competition based on statistical methods and examined the quantitative description of information in the US gross domestic product. Based on the concept of accepting information as a commodity, the scientist put forward the idea that the main condition for the development of society in America in the future will be an "informed economy."

In his concept, F. Machlup used specific empirical materials that describe the growth in the dissemination and production of not only scientific and technical information, but also desired social information in the United States. Later, in the USA and other countries, a number of economists, such as P. Drucker, D. Bell, E. Parker, M. Porat, A. Toffler, A. Mol, J. Stigler, K. Arrow, put forward the concept of an "informed society." Currently, as a result of their research in the national economy, such concepts as "information network", "information economy" and "information society" have emerged.

The analysis shows that in world practice, the most popular are two scientific points of view on determining the place of the information sector in the national economy, based on the principles of economic accounting, and they belong to F. Machlup and M. Porat.

F. Makhlup comprehensively studied the place of knowledge in the activities of a particular area and determined the synthesis of a new grouping of sectors of the national economy and the knowledge industry in essence.

Economist F. Machlup was one of the first to discuss the issue of determining what part of the national wealth is created through the production, processing and distribution of information products and services, as well as the part of the gross national product related to knowledge in general. He carefully examined the US national economy, identified 30 sectors that create knowledge, and divided them into 5 groups: education; scientific research and production; communications and media; information machines and instruments; information Services.

Dr. Mark Uri Porath, based on the existing system of national accounts, sought to determine the extent of information activity in the national economy. His scientific vision was to determine the types of information activities in the national economy on the basis of the adopted statistical system. This study is based on the idea that "information activity is one of the most basic elements of modern society." In his opinion, the economies of developed countries are moving from content production to "informed" production. M. Porat's research mainly pursued two goals: to determine information activity and calculate its size. The technologies used by information-producing industries, the products they develop, and the services they provide are so diverse that it is extremely difficult to group them into one industry. But they all serve for the production, processing, storage and distribution of information products. That is why they are combined into a single activity called "informed".

The improvement of science and information and communication technologies in developed countries shows that the ideas of scientists who put forward their theoretical proposals for the formation of an information society are finding their place. According to their forecasts, all countries of the world will become a single computerized and information society. Research has revealed the following characteristics of the information society:

• the problem of lack of information will be solved;

• information resources have priority over other resources;

• information economy is the main form of development;

• conditions are created for the widespread use of goods of the information and communication market as the basis for the development of society;

• a unified information field of human development is being formed.

One of the main features of scientific and technological development at the present stage is the determination of the role of information in society.

Here, famous scientists of our republic, academicians V.G. Kabulov, S.S. Gulomov, professors A.A., dealt with this problem. It is worth noting the scientific works of Abdugafforov, R.Kh. Alimov, M.I. Irmatov, T.Sh. Shodiev, B.Yu. Khodiev, B.A. Begalov and others.

Academician V.G. As Gabulov noted, "Economic cybernetics, based on the political-economic analysis of social production, considers information and materials as part of the economic system of radical transformation."

Management errors due to lack of information are very costly. In this case, the system that contains the most information about the efficiency of management and production, the development and use of advanced technologies wins.

Experts believe, first of all, that economists have free access to information as one of the main conditions for the effectiveness of a market economy in the context of industrial development. The main areas of their activity and social production are somehow related to information, and they make up 40-60% of employees. Information services account for 10% of the world's gross social product and national income. Thus, 90% comes from the USA, Japan and Western Europe.

Information is an important product of intellectual activity. In all industrialized countries, the development and implementation of "methods and means" for delivering these products to their users is proceeding at a rapid pace, which is reflected in the creation of the information systems and technology industry.

Information technology is a set of methods, devices, methods and processes used to collect, store, search, process and disseminate information.

The emergence of the information technology industry depends on how they ensure the creation of the information society. The information technology industry produces and supplies information products and tools to consumers.

Information products primarily imply the field of various knowledge obtained in a traditional way or using electronic technologies, as well as information and other forms of information.

The mass production of personal computers has opened up great opportunities, especially for the information technology industry. Personal computers have penetrated almost all spheres of human activity and expanded the capabilities of specialists to access the source of knowledge and participate in the process of their direct processing.

The development of information technology is directly related to the use of information systems by business entities. Modern information technologies help managers, specialists, and technicians process information and make decisions, as well as create a holistic and reliable modern information system.

Information technologies work both as an independent data processing system and as a functional component and provide a management process within a larger system. Such systems include industrial enterprises, firms, corporations, financial and credit and trade organizations, automated control of production and economic processes, scientific experiments, economic and mathematical models, data processing systems, library services and a number of other areas.

Currently, modern information technologies are widely penetrating not only into the field of education, but also into all sectors of the national economy: trade, business, etc.

The penetration of information and communication technologies into all aspects of our lives is radically changing the mechanisms of business and education. It is worth noting that in the context of the globalization of the world

economy, the size of the labor market in terms of the supply of educational services via the Internet is not limited.

The situation in Uzbekistan poses a very important task of intensive economic development, rational use of all types of resources, and the introduction of increasingly advanced tools into production.

Today, computer and information technologies, telecommunication networks, data transmission, access to Internet services and modernization are becoming priority tasks in our republic. It has become a tradition in the republic to hold Internet festivals and Internet forums with the participation of talented youth, the number of collective Internet access points in cities and villages is increasing, the types of information services are significantly expanding, and their services are becoming more and more accessible; intellectual developments are taking place.

All this makes the most effective use of the enormous possibilities of informatization the most important task of strengthening its influence on the processes of transition to market relations.

Improving methods for organizing information processes is one of the main problems of our time, the search for a successful solution to which determines the level of further development of management of economic systems. Its development using market methods should lead to great positive changes in the economy.

Improving the processes of collecting, processing and transmitting information based on modern methods and means not only increases the speed of obtaining information, but also serves to improve management efficiency by obtaining high-quality information. Therefore, the rational organization of information processes is the central link in improving management and makes the strategic course of business entities impossible.

Increasing the speed of data processing in an automated information system is negatively affected by exceeding the initial volume of information, that is, the lack of sorting of incoming information about the control object.

Simplification of procedures for providing information and coordinating the activities of individual parts of the facility will serve to increase the efficiency of automated information technologies.

Thus, in order to mobilize people to solve socio-economic and spiritual problems, it is necessary to timely collect relevant information, process it, organize it in a certain way and immediately deliver it to people. To do this, it is necessary to implement a program for informatization of society and introduce advanced information technologies.

The purpose of information systems is to teach students the theoretical and practical foundations of the formation of a national information system, the use of modern information technologies in all spheres of economic and social life. Based on this goal, the following are identified as the main tasks of information systems:

- study of information, information technologies, information systems, their structure and classification;
- determination of principles for creating information technologies;
- determination of stages of development of information technologies;
- determination of the evolution of information systems;
- familiarity with the conceptual and functional model of information technology;
- use of computer equipment and telecommunications in solving organizational and economic issues;
- study software and hardware of information systems and apply them in various sectors of the national economy;
- study the legal basis for the formation of the national information system of the Republic of Uzbekistan;
- expanding the use of global information resources;
- more fully satisfy the growing information needs of citizens, etc.

Therefore, certain information technologies are an integral part of certain information systems. It should be noted that by the present stage of development

of our life, attention to information systems has reached the state level, and a number of Resolutions and Decrees of the Head of State and our Government are aimed at the formation of a unified national information system, based on the existing and created complex of information systems of government bodies. implementation. In recent years, our government has developed the following information laws:

1. About telecommunications.
2. About information.
3. About communications.
4. About the radio frequency spectrum.
5. About postal services.
6. Electronic document management.
7. About electronic payments.
8. About electronic digital signature.
9. About e-commerce.
10. About computer crime.
11. Legal protection of electronic computers and database programs.
12. Topology and legal protection of integrated circuits.
13. On ensuring access to information and freedoms.
14. About standardization.
15. About discoveries, utility models and industrial designs.
16. On licensing of certain types of activities.
17. About copyrights.
18. About the system of scientific and technical information.
19. On the protection of personal data.
20. About information security.

Information services involve providing access, retrieval and presentation of information products, regardless of where they are located, in accordance with user requirements.

The emergence of types of information services has increased the demand for information products. Because they began to offer information based on the personal needs of users, and this made it possible to bring together the information models of producers and users. Thus, information services are one of the main characteristics of modern information and communication technologies among information products.

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