Theoretical and Practical Foundations of Information Technologies and Modern Approaches to their Use in Public Administration

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Abstract: The article highlights the organization of e-government management system development activities in Uzbekistan and abroad, as well as the necessity of applying e-government systems, their capabilities and effectiveness issues.

Keywords: E-government, IT, Geoinformation systems, public, citizen.

Introduction

In the age of digital technologies, increasing the efficiency of the public administration system, providing the population with various fast and high-quality services, including medical care, is being implemented through the e-government system. Geoinformation systems (GIS) play an important role in this process. They allow for visual analysis of territorial and spatial data, increase accuracy, and accelerate decision-making. GIS is widely used in all areas of the digitalization process. Digitalization has a positive impact on the development of the most promising methods of organizing medical care for the population worldwide. In this case, GIS plays an important role in the effective construction of information technology infrastructure in medicine. Therefore, developed countries actively use innovations in the field of medicine. Based on the foregoing, the use of geoinformation systems in the design of medical institutions in the e-government management system in our country is becoming a requirement of the times.

Methods

The research methodology is based on the methods of system analysis, management, and information processing, the measures taken to inform medical institutions in the e-government management system of the Republic of Uzbekistan, the application of geoinformation technologies in the design and management of medical institutions are analyzed from a scientific and practical point of view, and the measures taken to develop and improve them are substantiated. At the same time, the research is carried out on the basis of the concepts and principles of "E-Government", "Geoinformation Systems" (GIS).

E-Government is a management system aimed at delivering public services to citizens, businesses, and government agencies in an efficient, transparent, and convenient manner using information and communication technologies.

GIS is a system that allows for the collection, management, analysis, and visualization of geographical data. It consists of the integration of maps, databases, and software.

Results and discussions

The development of communications, informatization, and telecommunication technologies as an important factor in further improving the living standards of the population and strengthening the country's economic stability is among the priority tasks of the government policy of Uzbekistan. The essence, goals, and prospects for the development of this task are reflected in a number of resolutions of the President of the Republic of Uzbekistan in this area, according to which programs for the development of telecommunication technologies, networks, and communication infrastructure in the Republic of Uzbekistan for the near future have been approved.

The modern stage of society's development is characterized by the rapid growth of information technologies and the volume of human knowledge about the environment. Information technologies have become one of the important sources of development in a number of spheres of human activity, including political governance systems. The Center for the Development of the "Electronic Government" System in the form of state institutions under the State Committee for Communications, Informatization and Telecommunication Technologies of the Republic of Uzbekistan was established by Resolution No. PP-1989 of June 27, 2013. The concept of "e-government" has begun to be used as a factor in the development of information technologies in all state bodies, organizations, and institutions of the republic. At the same time, the experience of advanced countries and the opinions of scientific researchers on e-government were studied.

The concept of e-government did not appear by itself. For this purpose, foreign scientists conducted a number of studies and expressed the ideas obtained as a result of the research in their works. Before the concept of e-government, the concept of "information society" appeared.

Authors such as D. Bell, W. J. Martin, E. Toffler, and D. Naisbitt have made significant contributions to understanding ICT as a key factor in the development of progress within the framework of information technology theory.

According to D. Bell, the concept of "information society" became a new stage in the development of the theory of post-industrial society. He writes: "Post-industrial" society is a process. In his work "The Experience of Social Forecasting," he states that technological development leads to the transition from material production of products to an information economy, where knowledge and information serve as strategic resources and as a representative, i.e., an intermediary, for transforming post-industrial society. According to Bell, "The first infrastructure for development is transport roads, canals, highways, and others. All this allowed for the movement of goods and people. The second infrastructure is the means of energy transmission - water wheels, steam engines, gas, electricity, and oil pipelines". With their help, people provide themselves with energy for mass production. "Finally, the third infrastructure was postal, newspaper, telegraph, radio, and television. It is this third infrastructure that plays the role of a large information "explosion" and the expansion of the social and psychological impact of people.

According to the American sociologist Alvin Toffler, author of the book "The Third Infrastructure," industrial development at the end of the 20th century faced a systemic crisis. This crisis manifested itself in everything from social security, school education, healthcare, the international financial system to other spheres. The "third infrastructure" (the first infrastructure - agrarian development, the second - industrial) is not a continuation of industrial society, but a fundamental change in the historical direction. Toffler believed that the "third wave," an important resource of development, would become a platform for increasing the excess value of goods in the economy.

The relevance of the problem is based on changes in the field of information technology (IT), which are penetrating various spheres of public life, affecting society itself, covering central government bodies, local authorities, and other spheres of government.

Today, the Republic of Uzbekistan is implementing large-scale measures aimed at the development and widespread use of information technologies in state and local governance. In order to form a unified national information resource and ensure automated information exchange based on the use of global international information networks, the implementation of projects to create a network infrastructure of government bodies has begun. A list of information resources of state importance has been determined, and their state registration has been carried out. Scientific research is being conducted to create advanced information technologies and software, and to protect information within the framework of relevant state scientific and technical programs.

Monitoring the development process of "e-government" and evaluating their effectiveness are separate tasks, as the object of study is a dynamic, new, and negative concept.

In the early 1990s, M. Castells developed the concept "Information Age: Economy, Society, and Culture". In the concept, Castells comes to the conclusion that classical capitalism should be transformed into "information capitalism." He points out that the crisis of democracy is caused by a decrease in confidence in politics, the lack of freedom of the media, the ineffectiveness of legislation, and other similar problems. As a solution, he proposes the following: the development of local authorities, the widespread use of electronic communication, and the transition from a hierarchical management system to a network based on horizontal communication.

The concept of the information society, in turn, served as the theoretical basis for the concept of "electronic democracy." Researcher M.S. Vershinin asserts that "electronic democracy" is a voluntary democratic political system, in which information and communication technologies (ICT) are used to perform important functions of democratic processes.

In addition to the above-mentioned scientists, Y.U. Nisnevich also conducted research in this area. Y.U. Nisnevich pays special attention to considering the possibilities of "electronic democracy" to meet the demands of the time. In the author's opinion, ICT provides employees of any state or local body with "information openness", allows for the liberalization of material and human resources to improve the well-being of society.

Researcher Don Tepskott, in his book "Digital Economy," emphasizes: "New information technologies not only reduce government spending but also fundamentally change the ways government programs are implemented and the essence of management".

The concept and practice of the new public administration are based on the following basic principles:

➢ the state must comply with the standards of the information society and the information economy.

➢ the main problem of public administration;

➢ the need for a highly adaptable leader and the application of new electronic technologies;

➢ introduction of competition and competitiveness in public administration to reduce service costs and improve their quality.;

➢ Ensuring an individual approach to all citizens in cooperation with the state.;

➢ Increasing production discipline and reducing costs.

The administrative state was replaced by a governing one. At the same time, special attention was paid to the provision of high-quality public services. Therefore, ICT has been implemented throughout the government. The reforms confirmed that modern information and communication technologies can become an important tool for increasing the effectiveness of public administration. ICT allows managing various types of data, uniting government structures into a single network, increasing the effectiveness and quality of decisions, and providing services to

the population in electronic form.

These reforms aimed to restore trust in the authorities due to the inability of transparent bureaucracy to overcome the growing demands of society.

The introduction of ICT in the public sector is designed to bring the state closer to citizens, to implement it on the basis of a transparent, effective contract. This largely allows the state to integrate with other participants in the decision-making process, which emphasizes the equality of dialogue between formal and informal structures in the political sphere. It was necessary to develop a conceptual model that would effectively describe the interaction processes of new subjects within the network.

A new concept of understanding public administration was put forward in 1997 in the documents of the United Nations Development Programme, which included the concept of "Good Governance." "Governance," that is, "Management," should be considered as the manager of economic, political, and administrative power at all levels of the state.

The main principles of "Good Governance" are:

➢ **Visibility.** Government bodies should work transparently. They should use a free and understandable language..

➢ **Participate.** Citizens' participation in state policy ensures greater trust in the state..

➢ **Efficiency.** Programs should be effective and based on clear objectives, long-term results assessments, and experience.

➢ **Adaptability.** Programs should be consistent and flexible..

➢ **Reporting to the community.**

The introduction of ICT as a management tool has been transformed into the formation of "e-government." The emphasis here is not on technical aspects, but on changing the system of public administration, its structure, and its interaction with society.

For the first time, the term "e-government" was actively discussed in the scientific community with the help of the theory of the information society, then the discussions moved to the media and were recorded in regulatory documents.

In Russian scientific and political debates, the term "e-government" is derived from the English translation of the words "electronic government" or "e-government." The English word "government" means not only "higher executive power," but also "e-government" as a whole.

Almost all definitions of the concept of "e-government" can be divided into two ways: narrow and broad. In a narrow sense, the concept of "e-government" is equated with technological means - communication channels, fields, interaction mechanisms, etc. In a broad sense, "e-government" is understood as a new system between the state and society.

Smurgunov put forward two views on e-government: "At first glance, this concept reflects the improvement of public administration through the use of new ICT, which will allow increasing the efficiency of public services. In the second view, "e-government" means a change in the entire complex of relations between public administration and society.

The evolution of scientific approaches and definitions of "e-government" can be clearly understood through the materials presented at the All-Russian Joint Conference "Internet and Modern Society," which has been held annually since the beginning of the 2000s. This conference brings together all specialists in Russia and includes a separate block called "E-government in the Information Society."

In addition, among the works carried out in 2004, I.N. Kurnosov in his report "Implementation of the E-Government Concept: A New Stage" cited the following four definitions of "e-government":

1. E-government is defined as the interaction of government bodies using ICT with citizens and organizations, or it is also defined as an electronic form between citizens and the state. E-government includes visiting organizations, making phone calls, and sending mail.

2. The second group of definitions connects "e-government" with the process of providing public services to citizens in electronic form. They are based on the idea of "state services," aimed at serving the state and citizens as a form of implementing democratic principles.

3. The third definition is based on the group's understanding of e-government as the use of ICT in public administration. The use of information technologies (internet, mobile communications) in the structure of public administration makes it possible to change the state of interaction with citizens, business, and other government bodies.

4. Finally, the fourth definition is based on the concept of the information society, which is one of the reasons for the emergence of the term "e-government," and from this point of view, it is considered as public administration using ICT, which is one of the means of increasing the effectiveness of management, assisting state bodies, performing their functions. This approach is aimed at understanding e-government as a means of improving governance.

In 2011, researcher R.F. Azizov in his scientific report demanded a broad understanding of the essence of "e-government": The term "e-government" literally means the use of electronic technologies in the activities of executive bodies. However, "e-government" can also be widely promoted by covering all executive bodies (legislative, executive, judicial) and local self-government bodies, i.e., all structures.

In general, e-government is the constant optimization of the process of providing public services based on digital technologies, the Internet, and modern mass media, the participation of citizens and management in internal and external relations through transformations. E-government digitizes the provision of public services to the population, entrepreneurs, and government bodies, creates additional opportunities for citizens' self-governance, increases their awareness of technological innovations, and facilitates their participation in public administration.

E-government consists of the following main modules (systems):

G2C(Government to Citizens)

G2B(Government to Business)

G2G(Government to Government)

In his 2012 scientific report, E.G. Dyakov cited the "e-government pyramid" developed by the UN Department for Economic and Social Affairs (UN DESA) and outlined important stages in the development of "e-government."

Stage 1: The emergence of "e-government" - the creation of electronic pages or websites with a minimal set of official information.

Stage 2: "Growing" - creation of archives, download of official documents and placement of samples for their replenishment.

Stage 3: "Interactive" - provision of public services in an incomplete cycle (submission of applications for submitting an electronic document).

Stage 4: "Transaction" - transition to full-cycle operation of public services in the "24 hours a day, 7 days a week" mode.

Stage 5: "Networking State" is the provision of interaction with the front office (front office) and operates on the basis of an integrated back office (back office).

Conclusions

In the West, "e-government" is primarily seen as the introduction of information and

communication technologies to achieve more effective government management. The main task is to change the structure and form of management using new technologies. "E-government" has enormous potential to become the main mechanism for implementing the practice of "good governance." In this case, the main emphasis will be placed not on the development of technical processes, but on changing public administration through the provision of new electronic services.

The introduction of ICT in Western countries has led to an increase in the capacity of governments and large-scale changes in public life. "E-Government" served as an independent political strategy, not a technological solution consisting of another bureaucratic machine.

References

1. Xabibullaev I., Djumanov J.X. Ob informatsionno-kommunikatsionnoy texnologii v gidrogeologii [information and communication technology in hydrogeology]. Geologiya i mineralnie resursi. -T.: 2014. № 1. S.48-54.

2. Xaritonov, K.O. Prinsipi obnarujeniya impulьsov akusticheskoy emissii v zadachax geomexanicheskogo monitoringa massiva gornix porod [Principles of detecting acoustic emission pulses in the problems of geomechanical monitoring of rock masses].

3. Xushvaktov S.X., Anorboev E.A., Ma'mirov F.A. Analiz metodov geoinformatsionnogo kartografirovaniya v gidrogeologii [Analysis of geoinformation mapping methods in hydrogeology]. // Geologiya i mineral resursi. – 2021. - № 1. – S.42-48.

4. Xushvaktov S.X., Mardiev O.B., Anorboev E.A., Ma'mirov F.A. Razrabotka monitoringa podzemnix vod na baze sovremennix informatsionno-kommunikatsionnix i GIS-texnologiy [Development of groundwater monitoring based on modern information and communication and GIS technologies]//Geologiya i mineral resursi. – 2020. - № 1. – S. 73-78.