

# Influence of New IT on Development of Information Society in Kazakhstan

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**Abstract**—The global information process is strongly influenced by regional and national levels. Some countries have already developed and some are developing country entering state concept in the information society and the global information space taking into account the technological, socio-economic and cultural factors. The rapid development of information technologies, new media: the blogosphere, social networks, the transition to digital broadcasting in the 21st century, has made it necessary to understand the cultural and information processes in Kazakhstan. If the technical problems of communication have international similarity, then the issues of its social content differ depending on the countries, on the historical, economic and cultural development, the nature of the socio-political system of society.

**Keywords** — *communication technologies; information society; globalization; Kazakhstan.*

## I. INTRODUCTION

The term “Information Society” first appeared in the work of Japanese researcher T. Umisay in the 1960s [1], and after the definite discussion in the scientific literature, the concept of “Xoho shakaz” (“Information Society”) was generally accepted. But the social effects of new technologies have become the subject of study much earlier. One of the first significant contributions to the study of the problems was the works of O. Huxley, Mumford, J. Ellyulya book “Technological Society” (1965). The idea of Information Society related to the concepts of “global village” of Canadian theorist M.Maklyuen, “Postindustrial Society” of Japanese Professor I. Masuda, “Three Waves” of American sociologist E. Toffler. As part of broader philosophical concepts, the theoretical positions of Information Society were worked out by M. Suzuki (1988), D. Bell (1973), as a generation of “Intellectual” industry, which has been nominated to the leading positions of Information Systems [2]. The idea of post-industrial society, which was developed and launched by sociologist Daniel Bell, relied on the technology. In the future society, which D. Bell thought back in 1960, politics and ideology gave the way to computer technology and information. In doing so, the new communication technologies expanded the arena of social action, turned into the essential infrastructure in addition to transportation and national energy systems [3].

The term “Information Society” in 1966, became a major in the report of special group on Scientific, Technical and

Economic Research, established by the Japanese government for the output of the country economy prospects. Specialists who have offered this term, explained that the term describes a society in which an abundance of circulating high quality information, and have all the necessary funds for its storage, distribution and use. The Japanese in the 1960s have become active promoters of the idea of the industrial importance of the information. And they used it brilliantly in the global market competition.

The concepts of “Information Age”, “Information Culture”, “Highly-Information society” concluded in their sense analogous to the concept of “Information Society”. The President of the Information Society Institute, Professor at Aomori – Yoney Masuda University, who was among the first to attempt to justify the concept of IS in his book “The Information Society as Post-Industrial Society” (1981) meant by this concept the ability of society to the intellectual creativity, the creative intellectual activity rather than the production of material goods. The scientist considered that not material but the informational value, based on a system of computer-communication technology, was the force impulse behind the development of human society [4]. Information - is the core of the economic demands of society. And the economy and society grow and develop around the nucleus and the importance of information as an economic product exceeds the importance of commodities, energy and services.

The history of information and communication shows that in the 1950s, scientists paid attention to the impact of technology on the development of the media. A special role in this process was given to electronic media and, in particular, television. Canadian theorist Marshall McLuhan (1964) in his famous work “Intellectual media. Extensions of a Man” demonstrated the increasing role of television, which conquered the mass market overcoming space and time, and the whole world turned into a “global village”. He also spoke about the computers, which gradually entered into the daily lives of many people: “Today we live in an era of information and communication, because the electronic media instantly and constantly create a total scope of intertwined events, which bring together all the people” [5].

The modernization of a number of countries and regions in modern civilization can be successful while maintaining the company's identity in a globalized world, which is achieved in the process of a certain balance between external and internal

circumstances, between the momentum of external and internal capacity to improve society. This idea is clearly evident in the writings of M.K. Barmankulov (1993) - "Possibilities of Space TV", E.L. Vartanova (1992) - "Finnish model in turn of the century: Information Society and Media of Finland in European perspective", A. Gunazeker (1997) - "Asia and the information revolution in the perspective", L.Loy (1996) - "Social and economic issues in the Information Society: Prospects for South-East Asia".

New information technology and communication technologies (ICT), erasing the boundaries of time and space are the main "supporters" of the globalization process. And IT, in turn, changes the traditional economy and the forms of social activity, attitudes, lifestyles, habits of people. The process of convergence (merging, connection) of different spheres of communication and information enhances the transition to a new level, even in countries that are traditionally considered to be stable. "The speed of evolution of IT is so great that the publication of any research is behind the specific technological progress for half a year" [6].

Early studies in the field of IT drew attention to certain features of the new technology transfer, handling and storage of information, describing them as communication or information. In the collection of American researchers' articles "Issues of new information technology", the authors pay special attention to economic and cultural impacts of IT: to increase the production volumes in the information industry, change social balance in terms of access to information, to generate a new type of literacy that is associated with a new form of representation of information on the screen [7].

American scientist L. Sassmen (1989) in his book "The power, press and technology of freedom", considering the new possibilities of digital networks of integrated services, paid attention to the political importance of rapid communication of people in different corners of the globe [8]. Canadian researcher D. Winseck (1998) in the review of numerous works on the development of new ICT said that in all countries the geography information practically suggests significant differences in access to a new communication media - cable, satellite, computers, mobile phones - depending on the region [9]. The author emphasizes the idea of dividing the countries for information-rich and information-poor, information society will not reduce the digital inequality. According to experts, over 200 years, the gap between developed and developing countries has increased 50-60 times. D. Winseck believes that the emergence of "information suburbs" and following after them, the appearance of "information village" is not only the social and economic, but also technological process.

## II. RESULTS AND DISCUSSION

The development of mass communication is carried out in the era of the global digital revolution. Modern achievements in the development of the Internet, mobile telephony, cable and satellite TV, digital broadcasting, new media, are changing the course of development of global communications, the information landscape of countries and

regions. New technological advances of the information revolution are complemented by new media opportunities.

Today the level of information technology development of the country determines its position in the international arena, the nature occurring in the socio-economic and cultural processes. Mobile telephony, satellite, cable TV lead to a more convenience, variety television, personal communication. Reduction in computer technology, the introduction of digital communications, and the construction of fiber-optic lines - all this opens up new possibilities for communication. The development of network technologies and communication media increase information flow, improve the quality of socio-economic processes.

The present level of development largely is based on information and communication technologies, based on the active production and use of information. Not only natural resources and material wealth, but also the telecommunication infrastructure and information resources are a national treasure. As noted by professor E.L. Vartanova: "Modern communication systems, combining the latest technical achievements, overcome temporary limitation and geographical boundaries through the convergence of satellite, cable and phone. The building blocks of the information society and its technological infrastructure will be integrated services digital network (ISDN), broadband communication lines, mobile telephony and satellite communications" [10].

The national projects on the development of information society have already been taken or are being worked up in many countries, including Kazakhstan. The experience of many post-industrial countries is relevant for our country, where the formation of information society is going on laying the foundation for its development. Due to Kazakhstan's independence (1991), it is necessary to think about the historical, socio-economic, cultural and information processes in the country. Among the long-term priorities to 2030, in his address to the people of Kazakhstan, President of Kazakhstan Nursultan Nazarbayev noted the important role of communication development in the country.

Kazakhstan, to keep pace with the times, is aimed to follow the path of globalization of the world economy through economic diversification and gradual departure from the raw-material orientation. A primary step in this direction was the adoption of the "Strategy of Industrial-Innovation Development of the Republic of 2003-2005." As the part of the formation of the national innovation system, national technology parks were established in several regions. The key direction of the forthcoming stage of the republic's development will be the creation of a number of high-tech industries in the priority sectors of the country. Currently, state programs are being implemented: "Electronic Government", "Information Kazakhstan-2020", "Digital Kazakhstan", "Intellectual Kazakhstan-2020", "The intellectual potential of the country", "Program for the development of digital broadcasting of RK for 2008-2015", "Development of IT industry in the country". Its main provisions were developed on the basis of the Strategy "Kazakhstan-2050".

In the program "Information Kazakhstan 2020" it is planned by 2020 to increase the volume of television

production of Kazakhstan production to 60% of the total airtime. The number of Internet sites in .kz and .kaz domains should increase by 50% compared to 2012; the number of Internet media will make up 95% of their total number. [11].

The country has developed the State Program Digital Kazakhstan; its main goal is the progressive development of the digital ecosystem to meet the challenges of sustainable economic growth and enhance the country's competitiveness in the international arena. In the course of the implementation of this program, "Digital Kazakhstan is expected to make the following changes: the share of Internet users in 1981 will be 81%, the level of digital literacy of the population in 1981 - 81.5%, the growth of labor productivity in ICT in 2021 - 5.9%; the number of employed people in the ICT industry in 2021 is 110 thousand people, the share of state services received electronically from the total volume of public services will be 80%". [12].

Kazakhstan is actively introducing new information technologies in the mass communication. The vast territory of the country also contributes to the development of satellite TV - television without borders. A great help in this direction is the Kazakhstan cosmodrome Baikonur, the center for launching space rockets. Thanks to the satellite TV system "Zharyk" ("Light"), it became possible to broadcast TV programs from the northern and southern capitals to all regions of Kazakhstan. In June 2006, the first Kazakh satellite, KazSat-1, was launched. "Kazsat-2" was launched in mid-July 2011, which provides the republic with satellite communications, as well as digital television, broadcasting and telecommunications. In Kazakhstan, the State Program for the Development of Digital Broadcasting in the Republic of Kazakhstan for 2008-2015 was developed. Currently, the most important priority for the country is the country's transition to digital broadcasting. The transition to digital broadcasting in Kazakhstan by 2020 made it necessary to understand the technological, social, economic, and most importantly, cultural and information processes in Kazakhstan.

New information and communication technologies make their adjustments to the life of Kazakhstan's society: cable and satellite broadcasting, mobile Internet, cellular communications are being expanded, elements of interactive TV, digital broadcasting, social media, are gradually being introduced, increasing confidence in electronic mass media as an important source of information about events in the country and in the world.

The number of Internet users in 2017 was 77% of the population [13]. The number of users of social networks has reached 8 million. In the country, according to the Kazakhstan Internet Association, at the beginning of 2018, the top three popular social networks include: "Vkontakte" - 6 million users, Instagram - 5 million users, Facebook - 1 million, Twitter - 0.3 million users. Among the messengers - in the leaders of WhatsApp - 2.5 million, Telegram - 2 million and Viber - 1 million people. As shown by media consumption measurements, there are 158 media sites in the country; social media is growing in the country. In the country, cellular subscribers exceeded 32 million people (the population of the Republic of Kazakhstan for 2017 - 18.4 million).

The priorities in the development of information society in Kazakhstan have changed under the rapid introduction of new information technologies. It is important here to consider national identity, cultural identity of a society, the specifics of the communication development in the country in an era of digitalization.

The conditions for the development of information society have been created in Kazakhstan. New information technologies, liberalization policy in the field of quality management system have opened new opportunities for the development of the Internet, the emergence of new network operators, Internet service providers, new media, social network, which, in turn, promotes the development of a competitive information market that will allow the country to enter the global information space. Reforming the state will be successful in maintaining the society's identity in communication and economic globalization.

The global information society is formed locally and in different countries, this process takes place with a various degree of intensity and peculiarities, the movement to the IS is a general trend for both developed and developing countries.

The role of media in the public life of the republic has increased in recent years. The major economic groups have made substantial investments in the media market of the country impressed by the effectiveness of information technology.

The development of network technologies and media increases the information flow, improves the quality of socio-economic processes. Not only natural resources and material wealth, but also the telecommunications infrastructure and information resources constitute national wealth. Modern achievements in the development of the Internet, mobile telephony, cable and satellite TV, digital broadcasting are changing the course of development of global communications, the information landscape of countries and regions. New technological advances of the information revolution are complemented by new media opportunities: interactivity, multimedia, personalization of information, globalization, convergence, hypertext, speed, mobility, digitalization, multifunctionality, etc.

In the information age, investments in human capital, in human resources become more important than investments in the material sphere. New information and communication technologies, blurring the boundaries of time and space, become the main "aides" of the process of integration and globalization. And it, in turn, changes both the traditional economy, and the forms of social activity, and the mentality, lifestyle, habits of people. The process of convergence (merging, joining) of various spheres of communication and information strengthens the state of transition to a new level of development, even in those countries that are traditionally considered to be stable. Now the digital, multimedia interactive communication technology expands the borders between the countries, becomes more accessible in different regions of the world.

A new approach was needed, which was based on the interests of the people, and a great attention should be paid to

social, cultural, economic and management objectives. This approach ensured the use of knowledge and rich experience of citizens of the republic as the driving force of the new information space for the development of information society in Kazakhstan.

In the intercourse between civilizations, as is known, significant results are achieved in the exchange of spiritual, scientific achievements. In the modern world, there is an intensification of information communication, which requires knowledge of the communication specifics of each country, the development of principles of interaction at the national, regional and global scale.

### III. CONCLUSION

The position of affairs in the information sphere is considered decisive for economic development in many countries. According to the concept of "information economy", the distribution of social power in a society is ever more closely linked to the control of information over information resources. The rapid development of information technology over the past decade has been reflected in the revaluation of the role and place information in the value system of human scale. Requirements of IS in the 1960-1970s were technical; in the 1980-1990s requirements gained socio-political in nature. Now, in the XXI century the mass media affect our lives much more than anything else, hence the rapidly changing value systems and consumer demands. Many countries noted the importance of information and communication technologies, the need to invest in the information industry, bringing in it the private business sector.

The information industry is entering a new quantitative and qualitative level, affecting not only companies but also countries, regions; it determines the ability to survive in the competitive high-tech world of the XXI century. Mass communication of Kazakhstan is the first that respond to the challenge of time, they change their policies, seeking to meet the new increased requirements. Modernization of a number of countries and regions can be successful in maintaining its identity in the society under economic globalization and communication with the active

development of new information technologies and new communication media.

The information age began with the democratization of social and political life. The reorganization of society demanded the development of new communications systems, expanding contacts at all levels - international, national, local, interpersonal. Active attitude to dialogue and cooperation between nations and peoples, between the ancient and new civilizations are supported by the global communication system. And understanding promotes the information society as a vital necessity is dictated by the progress of human history.

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