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SYSTEM ANALYSIS, MANAGEMENT AND PROCESSING OF INFORMATION

Abstract. The authors of the article revealed the concepts of modern informatization, presented the share of Internet users and presented the main consumers. According to the authors, the active information resources are that part of the national resources that is made up of information available for automated search, storage and processing: formalized and preserved in the machine media in the form of working programs, professional knowledge and skills, text and graphic documents, as well as any other meaningful data, potentially available on a commercial basis to users of the national computer park. That is, on the basis of the ratio of the volume of active information resources to the total volume of national information resources, analysis can be made, data processing can be carried out. In Kazakhstan, there is an acute tendency for the pace and level of education in the field of informatics and information technologies to lag behind the corresponding rates and level of development of tools due to the low level equipped with modern means of computer science of educational institutions. However, for the effective use of information resources and production New knowledge is needed to improve the information culture of society.

Keywords: system analysis, management, processing, information, technology, users, software, internet.

Introduction. Kazakhstan has become an integral part of the world precisely at this difficult time of the initial process of globalization. At present, the process of informatization is manifested in all spheres of human activity. So the use of modern information technologies is a necessary condition for the development of more effective approaches to teaching and improving teaching methods. A special role in this process is played by IT. Kazakhstan achieved the right to hold the International Specialized Exhibition EXPO-2017 in Astana. This is our great victory, a global event. For the candidacy of our country, an absolute majority of 160 members of the International Bureau of Exhibitions voted. Thus, the whole world recognized the economic success of Kazakhstan. For 3 months Astana will become the world economic capital, 5 million tourists will visit Kazakhstan, billions of dollars of investments will come along with new technologies and innovations, tens of thousands of jobs will be created in the sphere of construction, infrastructure development, tourism, hotel business, small and medium business.

Main part. Information - information about objects and phenomena of the environment, their parameters, properties and condition, which reduce the degree of uncertainty, incompleteness of knowledge.

The information potential is becoming an equally important economic and social development factor, such as energy, industrial and defense potential, strength and educational potential.

The concept of the information potential of a society includes not only the entire industrial and technological complex of computer science in a country, but also a network of research, educational,

administrative, commercial and other organizations and social institutions whose activities contribute to the effective use of information resources, as well as preparation for these purposes of the required number of specialists of the appropriate profile.

A set of technological stages forms a technological process (technology). It can start at any level and not include, for example, steps or operations, but consist only of actions. To implement the stages of the technological process, different software environments can be used.

Properties of information technology:

1. Information technologies allow to activate and effectively use the information resources of the society, which today are the most important strategic factor of its development.
2. Information technologies allow to optimize and in many cases to automate information processes, which in recent years occupy an increasing place in the life activity of human society.
3. Information processes are important elements of other more complex production or social processes.

The New Century and the New Third Millennium opened up new opportunities for cooperation and cooperation between states and peoples.

Table 1 – Costs of ICT in the Republic of Kazakhstan for 2015-2017

ICT costs	2015	2016	2017	Change in %	Change in %
Total of them:	375600,4	269526,7	349943,6	-71,76	129,84
costs for purchasing software used on the basis of a license agreement	122603,2	37131,4	75042,4	-30,29	202,10
costs for independent software development within the organization	69208,5	11603,0	10931,0	-16,77	94,21
the costs of staff training related to the development and use of ICT	1491,0	1276,0	11816,0	-85,58	926,02
expenses for payment for services of third-party organizations and specialists associated with information technology (except for communication and training services)	36676,1	78586,8	105111,7	214,27	133,75
Note: MNE RK on Statistics. http://stat.gov.kz/					

According to Table 1, ICT expenditures in 2017 increased by almost 30% compared to 2016, but in 2016 they decreased by as much as 30% compared to 2015. At the same time, the cost of purchasing software used on the basis of the license agreement in 2017 increased by 102% compared to 2016, but in 2016 they decreased by almost 300% compared to 2015. This indicates the availability of various online programs, as all function from economically rational considerations. The same can be said about the costs of independent software development within the organization in 2017 decreased by 6% compared to 2016, but in 2016 they decreased compared to 2015 by more than 80%. It should be noted that the costs of staff training related to the development and use of ICT in 2017 increased by more than 9 times compared to 2016, but in 2016 they increased by only 15% compared to 2015. That shows the interest of organizations to improve the qualification of employees. Also, the costs for the services of third-party organizations and specialists connected with information technologies (except for communication and education services) increase every year by almost 33% in 2017 compared to 2016, but in 2016 they increased compared to 2015 in more than 2 times.

Information is inseparable from the information process, so it is necessary to consider the source of information and consumers of information. The role of consumers of information is delineated in this definition: information is new information accepted, understood and evaluated by the end user as useful. Information is information that increases the stock of knowledge of the end user about the world around us.

Consider the share of the population of Kazakhstan with the skills of the user of new technologies in figure 1.

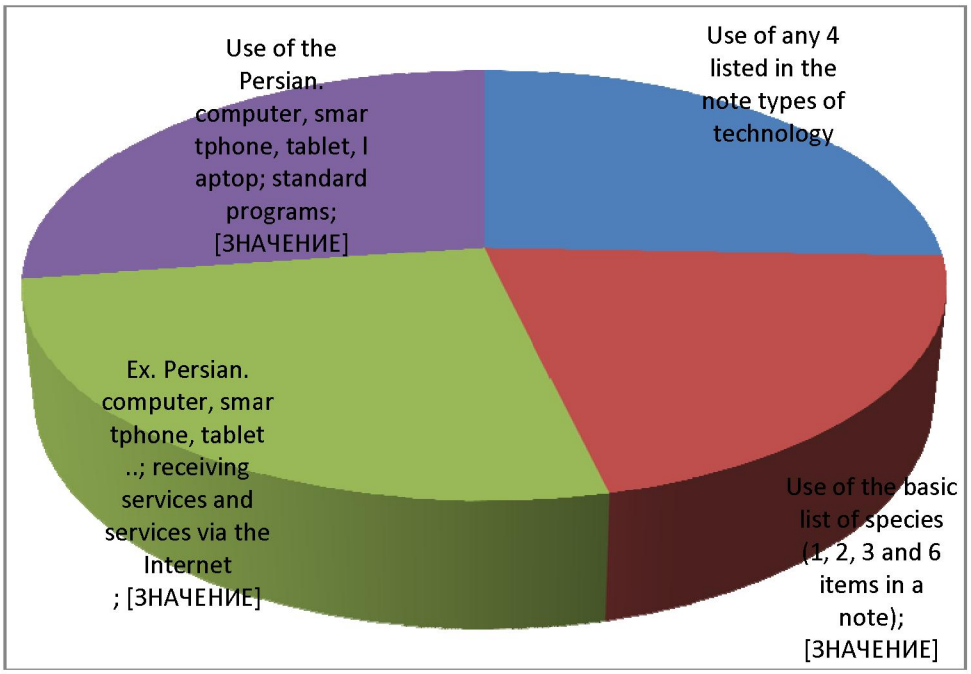

Figure 1 – Proportion of population with digital literacy for 2017.

Note: MNE RK on Statistics. http://stat.gov.kz/

According to the figure, the use of the basic list of new technologies is -60.8, the use by Kazakhstanis of a personal computer, smartphone, tablet, laptop; standard programs; receiving services and services via the Internet is -77.1 of the total share of residents of Kazakhstan, the use of a personal computer, a smartphone, a tablet, a laptop; standard programs-79.9, and the use of any of the four types of technology listed in the note -74.9.

Thanks to modern information technologies, the idea of continuing education is fully realized. Also, information technologies significantly increase people's motivation for learning, conducting various research works, experimenting, creating innovative projects, etc.

The share of Internet users in the Internet is discussed in table 2.

Table 2 – The proportion of Internet users for the Internet for 2015-2017, in %

Share of Internet users in the Republic of Kazakhstan	2015	2016	2017
at the age of 6-74 years	72,9	76,8	78,8
at the age of 6-15 years **	53,1	62,1	67,9
at the age of 16-74 years	77,2	80,2	81,5
Note: MNE RK on Statistics. http://stat.gov.kz/			

The share of Internet users aged 16-74 in the Republic of Kazakhstan in 2017 was more than 80%, but the proportion of Internet users is 6-15 years old and the dynamics of this age group is increasing every year.

Modern understanding of the information system assumes the use of the personal computer as the main technical means of processing information. In large organizations, along with a personal computer, a mainframe or supercomputer may be part of the database of the information system. In addition, the technical implementation of the information system does not in itself mean anything unless the role of the person for whom the information is intended is taken into account and without which it is impossible to obtain and present it.

It is necessary to understand the difference between computers and information systems. Computers equipped with specialized software are a technical base and a tool for information systems. Information system is inconceivable without personnel interacting with computers and telecommunications.

Conclusion. The world is on the verge of a new wave of colossal technological changes. Today only those countries who will confidently pass through the crucible of the third global industrial-technological revolution will win. It will open unprecedented opportunities for development. information and technological transformation of the world can "enslave" humanity, put it in absolute dependence on information and communication networks.

In the process of studying the discipline, not only traditional technologies, methods and forms of instruction are used, but also innovative technologies, active and interactive forms of conducting classes: lectures, laboratory classes, consultations, independent and scientific research work, lectures with elements of problematic exposition, case studies , business games, testing, solving of situational tasks, disputes, technology of explanatory - illustrative learning with elements of problematic exposition, technology of subject - orientations training, technology of developmental learning; technology of professionally oriented learning, technology of problem training, technology of information education, technology of personality-oriented learning, technology of organization of independent work, technology of collective thinking activity, technology of development of critical thinking.

In this connection, the problem of improving the information culture of society, ie, degree of his preparedness for the effective use of information resources and the production of new knowledge. The essence of this problem lies in the fact that there is an acute tendency to lag behind the pace and level of education in the field of informatics and information technology from the appropriate pace and level of development of tools. This trend is global. This is partly due to the generally known inertia of the educational system. But in Russia this problem is particularly acute because of the low level of equipment provided by modern computer science facilities of educational institutions.

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ЖҮЙЕЛІ ТАЛДАУ, БАҚЫЛАУ ЖӘНЕ АҚПАРАТТЫ ӨҢДЕУ

Аннотация. Авторлар заманауи ақпарат тұжырымдамасын ашып қойды, желідегі интернет пайдаланушылардың үлесін қамтамасыз және негізгі тұтынушыларды ұсынды. Авторлардың айтуынша, белсенді ақпараттық ресурс ұлттық автоматтандырылған іздеу үшін ақпарат қол жетімді етеді ресурстарды, сақтау

және өңдеу, бұл бөлігі болып табылады: ресми және кәсіби білім мен дағдыларды, мәтін және графикалық құжаттар жұмыс бағдарламасы түрінде тасушыларда тоқтатылған, сондай-ақ кез келген басқа ұлттық компьютерлік парктің пайдаланушылары үшін коммерциялық негізде қол жетімді болатын маңызды деректер. Яғни талдау жасауға болады, ұлттық ақпараттық ресурстардың жалпы көлеміне белсенді ақпараттық ресурстарды көлемінің қатынасы негізделген, салдарынан төмен деңгейге құралдарының даму тиісті қарқыны мен деңгейіне бастап информатика және ақпараттық технологиялар білім беру саласындағы қарқынын және деңгейін қалып Қазақстан өткір үрдісі деректер өңдеу жасауға оқу орындарының компьютерлік білім берудің заманауи құралдарымен жабдықталған, бірақ ақпараттық ресурстар мен өндірісті тиімді пайдалану үшін Қоғамның ақпараттық мәдениетін жақсарту үшін жаңа білім қажет.

Түйін сөздер: жүйелік талдау, басқару, өңдеу, ақпарат, технология, пайдаланушылар, бағдарламалық қамтамасыз ету, интернет.

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СИСТЕМНЫЙ АНАЛИЗ, УПРАВЛЕНИЕ И ОБРАБОТКА ИНФОРМАЦИИ

Аннотация. Авторы статьи раскрыли понятия современной информатизации, представили долю пользователей сети интернет и представили основных потребителей. По мнению авторов, активными информационными ресурсами является та часть национальных ресурсов, которую составляет информация, доступная для автоматизированного поиска, хранения и обработки: формализованные и законсервированные на машинных носителях в виде работающих программ профессиональные знания и навыки, текстовые и графические документы, а также любые другие содержательные данные, потенциально доступные на коммерческой основе пользователям национального парка компьютеров. То есть на основании отношения объема активных информационных ресурсов к общему объему национальных информационных ресурсов можно составить анализ, произвести обработку данных В РК остро ощущается тенденция отставания темпов и уровня образования в области информатики и информационных технологий от соответствующих темпов и уровня развития инструментальных средств по причине низкого уровня оснащенности современными средствами информатики учебных заведений.. Однако для эффективного использованию информационных ресурсов и продуцированию новых знаний необходимо повышения информационной культуры общества.

Ключевые слова: системный анализ, управление, обработка, информация, технологии, пользователи, программное обеспечение, Интернет.

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