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INFORMATION AND COMMUNICATION TECHNOLOGIES AIMED AT INTELLECTUAL NATION FORMATION

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Abstract: The purpose of this study is to examine the role of information and communication technology (ICT) in enhancing community outreach, academic and research collaboration, and education services in an academic setting. The main aim of the study is to analyze the current ICT development trend in the formation of intellectual nation in Kazakhstan. The formation of “intellectual nation” is a way of modernization of society in the XXI century, when a creative person becomes the main source of development. For Kazakhstan, like for other developing countries, the most important strategic task is to conduct an overall modernization, under which not only institutions and mechanisms of modern society, but also the modern society itself will be created. Questionnaire development was initiated by asking participants involved in community outreach, academic, research, education, and support to provide feedback on current ICT issues and future recommendations for relevant ICT too.

Аннотация: Зерттеудің мақсаты – ақпараттық-коммуникациялық технологияларды (АКТ) қоғаммен байрланыстыруды, академиялық және ғылыми ынтымақтастықты, академиялық ортадағы білім беру қызметтерін кеңейтудегі ролін зерттеу. Зерттеудің негізгі мақсаты – Қазақстанда интеллектуалды ұлт қалыптастырудағы ақпараттық-коммуникациялық технологияларды дамытудың ағымдағы үрдістерін талдау. «Интеллектуалды ұлттың» қалыптасуы – шығармашылық адам дамудың басты көзі болған 21-ші ғасырдағы қоғамды жаңғыртудың жолы. Қазақстан үшін басқа дамушы елдер сияқты, ең маңызды стратегиялық міндет – жалпыға бірдей модернизация жүргізу, оның шеңберінде заманауи қоғамның институттары мен механизмдері ғана емес, қазіргі заманғы қоғамның да құрылуы. Сұрақ-сауалнаманы әзірлеу (сауалнама) халықпен жұмыс істеу, академиялық қызмет, зерттеу, білім беру және қолдау көрсету, қазіргі АКТ проблемалары бойынша кері байрланысты қамтамасыз ету және АКТ-ның тиісті құралдары бойынша болашақ ұсыныстарды ұсыну үшін оларға пайдалы болатын сұрақ қою арқылы басталды. жұмыс істейді және АКТ-ның қазіргі мәселелерін қамтиды. Зерттеу Қазақстанның әртүрлі дереккөздерінен алынған әртүрлі мәліметтер негізінде жүргізілді.

Түйінді сөздер: интеллектуалды ұлт, бұқаралық ақпарат құралдары, ақпараттық даму.

Аннотация: Целью данного исследования является изучение роли информационных и коммуникационных технологий (ИКТ) в расширении охвата сообщества, академического и исследовательского сотрудничества и образовательных услуг в академической среде. Основная цель исследования – проанализировать современные тенденции развития ИКТ в формировании интеллектуальной нации в Казахстане. Формирование «интеллектуальной нации» – это путь модернизации общества в XXI веке, когда творческий человек становится основным источником развития. Для Казахстана, как и для других развивающихся стран, важнейшей стратегической задачей является проведение общей модернизации, в рамках которой будут созданы не только институты и механизмы современного общества, но и само современное общество. Разработка вопросника(анкеты) была начата с того, что попросили участников, вовлеченных в работу с населением, академическую деятельность, исследование, образование и поддержку, предоставить отзывы о текущих проблемах ИКТ и будущие рекомендации по соответствующим инструментам ИКТ, которые будут полезны для них в их работе, и охватить текущие проблемы ИКТ. Исследование проводилось на основе разных данных, полученных о Казахстане из разных источников.

Ключевые слова: интеллектуальная нация, средства массовой информации, информационное развитие.

Introduction

The choice of intellectual capital is the way of compliance to the requirements of entering the club of world competitive countries. Since this project is devoted to the problems of humanitarian technologies development aimed at investing in the development of Kazakhstan knowledge society, the researches on the economic development of the country through intellectual investment in the world policy are taken as the basis. Human intellectual potential in these scientific studies is considered as an investment. Therefore, it is very important to study and analyse the mechanisms of innovative tasks solutions to improve the competitiveness of social and economic sector of the country by attracting investments in the development of the country's knowledge society, development of methods for its effective implementation and evaluation system. The strategic objective for Kazakhstan, as well as for other developing countries, is to conduct an overall modernization, in terms of which not only institutes and mechanisms of modern society, but the modern society itself will be created. Nowadays a new division of labour is being formed – in the sphere of intellectual labour, in the sphere of scientific and cultural production and service – new knowledge economy and information society are being formed. Kazakhstan, in collaboration with its partners, can and should make every effort to enter the society of the future. Aggregate state competitiveness in the global economy and the ability of sustainable development depend on three strategic resources. The first strategic resource is natural wealth, namely: ground, water, mineral resources, woods, etc. The second strategic resource is material and technical base and financial capital; here the main points are existing production equipment, factory buildings, machinery, funds, quality and quantity of various material components of the country's activity. The third strategic resource is manpower resources – people. It is obvious that the level of human resources development, the level of education and culture are the main factors for economy and society development. Development of the world leading countries has led to the formation of post-industrial, and then to new economy – knowledge economy, innovation, global information systems, intellectual labour economy, science and latest technologies. The basis of this new economy is intellectual potential, which is a dominant of social and economic development of modern society. Today education becomes an economic sector, and human factor is the main resource for economy development where a person who can discover, create something new in industry, science, culture,

etc. is of great value. That is why the most important mission of higher education in Kazakhstan is preparation of intellectually developed, creatively working professionals – the citizens of the Republic of Kazakhstan.

The authors of this scientific publication have been working in three directions. The first one is an analysis of works of domestic and foreign authors on the study of humanitarian technologies. It was necessary to determine the definition of the concept of “humanitarian technologies” and their influence on the formation of intellectual society. Also systematic and comparative analysis of the works of prominent scientists who conducted the research in the field of intellectual investments, intangible assets, economic freedom, political freedom, mass communication and public interests, political discourse and metaphoric has been performed.

Scope and methodology

Transition from industrial to post-industrial society has significantly strengthened the role of intellectual factors of production. Increasing of value added in the economy is happening today mainly due to intellectual activity, improvement of technological level of production and dissemination of modern information and communication technologies [1]. Analysis of achievements of developed countries shows that their high competitiveness and economic growth are mainly determined by the efficiency of processes of creation and use of knowledge. Currently in industrialized countries up to 80-95% of gross domestic product fall to the share of new knowledge embodied in equipment and technologies [2].

Under modern conditions new scientific discoveries, technological innovations, increasing quality of intellectual capital, dynamic development of information and computer technologies, e-commerce, mobile communications, and expansion of business space become important factors of economic growth. Modern economy based on advanced information technologies as well as on new scientific knowledge, is called “new”, “information-networking” economy or knowledge economy («knowledge industries») [3]. Widespread introduction of information and communication technologies to all spheres of the economy and everyday life is the most important technological feature of modern world economy development. In the process of informatization of economy, information and technological breakthroughs are closely intertwined in a single process, which has a tendency to self-acceleration. This means continuous development of information and communication

technologies (ICT), resulting in a qualitative upgrade of technological basis of production. In such a case, the attention focuses on the diversification of economy structure, development of non-capital intensive sectors, ICT, which should lead to acceleration of economic growth.

High technologies are a cutting edge of human thought, and the degree of responsibility of those who generates, develops, promotes, or borrows them is immeasurably high in terms of international integration [4]. Communicative incompetence borders with professional ignorance in the age globalization. The pace of international communications is extremely high and it requires high efficiency of interaction, mobility as well as impeccable accuracy of information transmitted. Man-made disasters are the highest fee for incompetence in the XXI century [5].

Thus, the globalization phenomenon is beyond purely economic frameworks, in which it tends to be interpreted by many researchers of the subject and which covers almost all spheres of public activity, including politics, ideology, culture, lifestyle as well as the very conditions of human existence [6]. The role of information technologies in the development of society is to accelerate processes of receipt, distribution and use of new knowledge by the society. A.K. Dzhilkibaeva, a senior finance expert of the Centre of Scientific Economic Expertise of "Economic Research Institute" JSC notes [7] that in the past decade information and communication technologies (ICT) in the society take up stronger positions, entering not only everyday life of the population, but almost all spheres of economic and social sectors. The role of information, knowledge and technology, which are the key components of information society, are growing rapidly. Developed and many developing countries, recognizing the importance of information society and development of information and communication technologies within long-term economic growth, take active positions in development of ICT sector as one of the key areas of public policy. The countries that have focused their efforts on the development of information and communication technologies today have provided themselves with increase of productivity and quality of governance. Moreover, the availability of a wide range of information services had a positive impact on the development of human capital, promoting the growth of competitiveness of the states [8].

One of the main objectives of the ICT industry is to create a digital transport environment to support informatization processes, to develop modern telecommunication infrastructure and its

integration with the infrastructure of other states. Therefore, development of transit potential in the field of information technologies and integration of national economy into the global environment also act as an important task and one of the priorities of infrastructure development indicated in the strategy [9].

Thus, the tasks, specified by the President in "Kazakhstan – 2050" strategy confirms the importance and role of ICT development in achieving long-term growth of the economy of our state. In terms of innovation, development institutions were established and a task of creating and implementation of industrial and innovation development was first set in Kazakhstan. All this was quite a strong base for initiating "Intellectual Nation-2020" program by the President of our country. One of the most important ways of bringing the state program aimed at formation of intellectual nation to people is Mass Media. Usually it is television. Due to visuality, presence effect and impact on emotional perception television has become one of the main allies of the state in the process of formation of intellectual nation. The Internet takes the second place. We cannot imagine modern processes of information transmission without the World Wide Web. Innovative processes in Kazakhstan education was reflected in the variety of types and models of educational institutions. Development of proprietary training courses was carried out. The range of educational developing technologies expanded, and contacts with foreign teachers were established. Knowledge is an essential factor human society development, and information technologies are the basic tools of society informatization. Development of information technologies, development of World Wide Web, global, regional and local computer networks have created a platform for knowledge management as an intangible asset.

Thus, modern information technologies are becoming a binding condition to simplify working with knowledge. They allow faster dissemination of knowledge, facilitate the effective operation of any organization due to employees' knowledge, and create new ways of knowledge management and generation. Researchers have identified three classes of working techniques with knowledge: technologies aimed at creating knowledge through processing and analysis of information, technologies aimed at discovering and studying knowledge by extracting knowledge from new sources of knowledge and technologies aimed at knowledge distribution within a system or a network [10].

Mass media is an independent industry, aimed at shaping public opinion, using organizational and

technical systems that provide rapid transmission of information and its mass replication. Mass media is a public facility. It not only informs consumers but also shapes public opinion, thus affecting propaganda and spread of the above mentioned indicators [11].

Mass media is of great importance in widespread political communication processes, in formation of necessary information and communication space, in successful implementation of public relations, in putting many of those discussions on the agenda.

But the mass media is considered as market more than as an activity of political communication. On the basis of this feature of the mass media, we can say that it is studied as the business market, providing the target audience with products of mass media [12]. However, this method does not disclose the actual activity of channels of mass information and communications in full.

In Europe, public means of mass communication began to lose their positions in information market. On the agenda was the question on reducing the number of public means of mass communication. At that time European Union Decree was signed, which says: since information is one of the forms of market goods, it should not be funded by tax revenues. But, as the world practice shows, the mass media of public orientation is still in demand [13].

It is known that in the future the number of new players in media sector will increase on global level. Restructurization in the field of mass media, elimination of state control is the main goal of politicians and political advisers, political technologists and other experts in the field of mass media.

Expansion of mass media field and moving aside the policy, reducing the number of public mass media have led to changes in methods and technologies, implementing information and communication processes [14].

Impact of global mass media on political, economic, scientific and technical factors of society and national characteristics in the information and communication space became the basis for the development of political communication in a new direction [15]. Further we will consider generality and particularity of international experience in the development of political communication studies.

Mass media affect national integration: provide internal and international market links; stimulate demand for modern services and goods; affect introduction of modern values and methods in everyday and healthy lifestyle, agriculture, industry.

Differences in power and possibilities of mass media of developed and developing countries create

not only conceptual, but political difficulties. The idea of “new global information order” is a good example of it [16].

The global system of mass communication is controlled by the developed Western countries. For example, the spread of world events is controlled by leading television networks as “Associated Press”, “United Press International”, “New York Times”, “Newsweek”, “CBS”, “CNN”, “NBC”, “ABC”. In addition, Western countries, managing technologies of production and distribution of television and radio programs, have a significant impact on the position of mass communication in developing countries.

Therefore, the concept of a “new global information order” in 1978 was considered at the international level and had been officially adopted in documents of UN General Assembly and General Conference of UNESCO. Communication, information and knowledge are the driving force of progress, contributing to improving the level and quality of life. ICT (information and communication technologies) whether their traditional or modern forms provide new and reliable development opportunities for the people around the world. Besides, many countries, especially the least developed, do not have full access to information and exchange of information, which deprives them of a chance on the prospects of long-term and sustainable development. Communication has a double challenge – to promote the development of economy and mentality. Its implementation is associated with multicultural factors and openness, sustainable development strategy, creation of the atmosphere of trust in the society. For Kazakhstan the development of information and communication technologies in general and satellite technologies in particular has become one of the key factors in resolving issues of competitiveness. As you know, one of the main areas in implementation the program of forced industrial and innovative development of the Republic of Kazakhstan till 2014 is the development of communicative technologies and training of highly qualified specialists in this field [17].

According to International Telecommunication Union (ITU), specialized UNO organization, defining standards in the field of information and communication technologies (ICT) Measuring the Information Society 2012, is one point in advance of Russia in the global ranking of the development of information and communicative technologies. Thus, according to ICT Index, Kazakhstan has taken the 55th place and Russia – 56th [18]. Sweden has taken the lead in the ranking; Singapore took the

second place and Finland – the third. The Index was developed in 2007 on the basis of 11 indicators; the International Telecommunication Union operates them in its assessment of ICT development. Index brings these indicators into a single criterion, which aims to compare the progresses in ICT development in countries around the world and can be used as a tool for comparative analysis at the global, regional and national levels. These indicators are related to ICT access, use of ICT, as well as practical knowledge of these technologies by the people of the countries surveyed. We note that in the framework of the strategy of communication development a Fund of information technologies development has been established in Astana city. Its mission is to help people of Kazakhstan implement innovative projects. This year already there will be a contest of “start up projects”. Winners will receive funds for implementation of the ideas as well as the possibility to complete intensive training course on the basics of entrepreneurship. Both teams and individuals, who have undergone the procedure of evaluation and proven the commercial potential of their product or technology solution, may participate. Such communication services providers as “Kazakhtelecom”, “Kcell” and “Kar-Tel” will help heavily the ICT development fund. Such funds have already been working successfully the United States and Europe. One of the demonstrative examples is “Y combinatory” in the USA. Having invested 18 thousand dollars to DropBox data storage service, the fund specialists have established a company, whose capitalization at present reached 4 billion dollars.

Mass media is a field that defines and shapes intellectual values. Therefore, country’s development, spiritual prosperity of people, nation’s consciousness-raising, improving mass thinking and examination of public opinion is at first performed, created and implemented through the Mass media [19]. In this regard, Kazakh press is entrusted to perform a specific mission, which is to determine information direction leading from intellectual potential to national intelligence, communication channel and communication mainstream. Today national publications have a priority direction – it is a loyalty to national goals and riches, fair treatment for people, care of spiritual values.

Conclusion

Sovereign Kazakhstan showed impressive samples of new statehood, social stability, internal agreement and continuing development of economy and political system. It is an undeniable fact, proving

scientifically verification, foresight and continued success of the President’s political course, supported by all the people of Kazakhstan.

The problem of formation of intellectual society set new challenges to science; they involve the need for collaborative researches, interdisciplinary links between socio-humanitarian and socio-political sciences for the purposes of spiritual development of society.

Proceeding from the above, we can make the following conclusions:

1. Today’s youth see people received Kazakh education as the basis of future intellectual nation. It does not mean that education should be limited to one country; it should be aimed at the country’s prosperity. A model of intellectual nation must include patriotic aspects – people should know their native language and culture. These requirements especially emerged during the work with focus groups conducted in the regions. Young people spare no time and effort on detailed study of spiritual values of their country.

2. National mode of intellectual nation assumes integration in the global scientific and educational processes. That is, a representative of intellectual nation should not be closed within one country. In order to create intellectual potential all the best foreign experience including social, economic and cultural crisis situations all over the world has to be used. It is here where Informational and communicative technologies (ICT) should work, covering all the spheres of economic and social fields. The role of information, knowledge and technology, which are the key components of information society, should grow rapidly. Availability of a number of information services must increase, which positively affects the development of human capital and which will promote competitiveness of Kazakhstan.

3. A model of intellectual society must include the development of science and scientific-research institutions. It is impossible to form an intellectual nation without developing modern science and creating own scientific schools.

4. A model of intellectual nation implies continuing education starting from a kindergarden. The President of the Republic Nursultan Nazarbayev in his address clearly defined: “In order to become one of the world developed countries we need appropriate knowledge. Knowledge will make Kazakhstan one of the 50 developed world countries”. “Balapan” program is focused on complete coverage of preschool children. It is planned to open 20 intellectual schools with enhanced studying of natural history and mathematics for talented children; these

programs enable to lay the grounds for the formation of intellectual nation. The programs mentioned above are the beginning of our country's innovation development.

The organization of activities within these positions provides coordination of complex measures affecting the development of information policy of the country, equal access to information for all people, establishment of a sustainable dialogue between people and authorities, professional development of mass media means.

Besides, the studies conducted by the authors of this research work, have proved the readiness of Kazakh people to create intellectual nation and understanding the necessity of this historical choice. This is evidenced by young people's willingness to get a quality education, to develop, to become professionals in their field and to work honestly for the benefit of their Motherland.

Mass media only partially serve as a political tool of society and government i.e. can be considered this way only in terms of movement of politically relevant mass information. The degree of mass media information load in the space of power and thus the ability to activate the communicative potential interested in contacts with the authorities of the population should be a criterion for inclusion mass media in the political sphere. Even having mass audience media usually works in another information field, outside the frameworks of political interests and behaviour of citizens. As for the other categories of media (e.g., private), their political component may have even more unstable value, mixing with the educational,

cultural and other components of their activities. All this certifies the fact that the media in Kazakhstan is not only a social institution, but a socio-political one.

Human capital – is the wealth of each state. Today a nation forming intellectual nation is a nation historically shaped and combined by spiritual, socio-economic, cultural and political ties. In order to form a national intelligence, we need knowledgeable and competitive at the international level citizens. And the media's role in this matter is difficult to estimate.

The results of this research can be successfully used in the development of scientific concepts in the sphere of intellectual society development and development of intellectual potential; in implementation of the national information policy aimed at shaping public consciousness of a citizen of intellectual society; in implementation of comprehensive programs on strengthening Kazakh model in the way of intellectual society in the process of modernization; to use the information and communication technologies affecting the development of Kazakhs political culture and form personal- national to mass public consciousness; in activities of national and international centres that use the achievements of humanitarian technologies social conflicts; in predicting prospects of becoming intellectual nation of the country.

Industrial and innovative development, establishment of an intellectual nation for Kazakh society is the truth, which will be implemented in the nearest future. From this perspective, Kazakh land will not only accept intellectual values but also produce and develop them itself.

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