PROBLEMS AND TENDENCIES OF DEVELOPMENT OF EDUCATION IN INFORMATION SOCIETY

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Abstract. The article deals with the problems and trends of the development of education in the information society. The paradigms of educational process formed in accordance with man-centric trends in the development of modern society are discussed.

Keywords: knowledge, education, information, information society, technocratic thinking, knowledge society, knowledge economy.

Introduction

Informatization of the society as one of the necessary conditions for its development leads to the formation of not only the new information environment in which people live, but also to new information structure of their lives and professional activities.

Informatization of society provides: active use of information resources of society (that are constantly expanding); the use of information and communication technologies in manufacturing; intellectualization of work; high level of information services, the availability of information to any member of the public; data visualization. This requires continuous professional development of an individual as well as groups of experts and entire communities (especially in the sphere of the ownership of the means of information and communication technologies). The aim of informatization of education is to prepare an individual to fruitful life in the information society.

Informatization of society implies not only economic, environmental and social changes. It is also a new way of life and new requirements for people who live in the community. Computerization affects their way of life and spiritual culture.

It is obvious that the development of computer technology largely determines the emergence of new rules of conduct and specific people who strictly follow these guidelines. Information culture is organically linked with this process. Its subject is Information Society (Vashchekin, 1990). Meanwhile, the changes in the education system are under way. The paradigms of the educational process are also changing.

According to the man-centric trend in the development of modern society (the formation of the versatile personality that along with the mastery of the knowledge, abilities,

skills involves the formation of beliefs, world outlook, ideals, aspirations, interests, habits, attention, will, thought, etc.; the introduction of innovative teaching technologies that facilitate learning motivation, mobilization of creative power of students, actualization of value-semantic aspects of one`s own educational activities, independent decision-making, reflections about mechanisms of self-development) personality-oriented educational system is being established (Kremen, 2002).

Informatization of education primarily involves the growth of new ICT-oriented teaching and educational technologies, computer-oriented teaching systems (Zhaldak, 1989), the creation and use of modern educational systems, computer-oriented learning environments (Bykov, 2012) and, in general, carrying out the research aimed at improving the efficiency of educational process based on its fundamental reorientation from dominance of reproductive teaching to the dominance of creative search principles on all stages of the educational process; from the rigid harmonization and uniformity of purpose, content, methods, means and organizational forms of education, training and development to personalization and differentiation of teaching and learning of students; from monopolistic indoctrination of all components of the educational process to ideological pluralism, freedom of choice of place in life, fundamental principles of world outlook, spiritual formation and development; from the systematic imbalance of technocratic and humanitarian targets and priorities to harmony of nature-expedient education and teaching and learning interaction of teachers and students.

Based on the theoretical research of a number of scientists let`s define important trends in the development of education in the information society:

-Continuity of education (taking into account the rapid growth of knowledge, information resources, development of technologies in all spheres of activities of society and individuals, it is necessary to learn throughout the whole lifespan).

-The mutual dependence of education, science and culture (close ties of education with culture, science, advanced technologies).

-Strengthening the predictive direction of education.-Creating information educational environment based on scientific and technological progress.-Creation of single information educational space of the country and its integration into the global information educational space.

-Personal orientation of education (the formation of versatile personality, strengthening the efficiency of personal and developmental potential of education).

-Humanization of education (the formation in the individual their own special form of human relation to the world and to themselves, to their own activities therein, rejection of technocracy, disclosure of humanitarian potential of mathematical sciences).- Humanization of educational process (e.g., by creating conditions for the versatile development of students and teachers).

-Fundamentalism of education (the intensification of comprehensive theoretical, scientific, professional training of students which will enable them to create their own coherent picture of the world; study and integral formation of ideas about the fundamental laws of nature and society).

-Integrity of education (the implementation of interdisciplinary connections within separate disciplines, building a holistic systematic view of the world).

- Priority of ethical component (educating people with a high degree of responsibility for the fate of their country and humanity as a whole, finding by an individual the right

combination of freedom, responsibility and self-restraint as key regulators of their own activities, the formation of a personality with value orientation).- Culture expediency of education (harmonious existence of man, society and nature, education as an element of human civilization and at the same time a component of the cultural traditions of their own country).

- Nature expediency of education (education orientation for the purposes of understanding and preservation of nature, Noospheric development of society, the preservation of the planet's biosphere and the survival of mankind as a species).

The combination of traditional and innovative directions of ICT in the educational process has led to the establishment of the integrative concept of the use of these technologies in university education that considers ICT primarily as a tool for the development of student`s personality as well as an aid to transfer them to the mode of self-development that transforms a student from the object of pedagogical influence to the full subject of the educational process and facilitates the actualization of their management activities as an active participant of the information process within the education system.

A teacher in order to use, upgrade, adapt or design information technologies of training should focus on the system of requirements that will ensure scientifically founded choice of objectives, content and methods of organization of educational activities. In the process of designing ITN basic principles of didactic, technical, organizational, ergonomic, aesthetic character should be considered.

Due to the fact that in the context of the use of ICT the center of gravity is a student (pupil) that actively builds a learning process, choosing the basic trajectory in the educational environment, the important function of the teacher is his ability to assist students in effective and creative learning and the development of critical thinking about information they receive (Kremen, 2002). Thus, the main competence of the teacher in the information society lies in their role as assistant, consultant, mentor (not a "repeater" of knowledge) in the world of knowledge and also in the formation of integrated quality to become a Personality.

Teaching job is the one that requires meticulous preparation and continuous improvement throughout the whole period of professional activities. It is always necessary to constantly reinforce the theory by practice and experience by basic knowledge. In addition, a teacher must constantly analyze their activity making appropriate adjustments to it, to be able to evolve and to adapt to the conditions, which are constantly changing, remaining at the same time the source of values of our society and humanity in general. Education is a priority value of society (special is the role of education in the information society: the growth of information flows, constant updating of knowledge, the need for continuous education throughout lifespan, etc.). To disclose and form the basic values of society and universal values of humanity to the pupils (students) is one of the main roles of a teacher in the world. It is obvious that to fulfill this task the skills of a teacher are not enough. The educational establishment itself has to become the environment where these values would be used in practice.

Higher, more perfect form of the information society is a knowledge society (a society based on knowledge, Knowledge society, or the K-Society).The development of each type of society is associated with the elaboration and application of new knowledge. For example, in the 80s of the last century new qualitative features were defined in the process. Humanity learnt how to convert data into digital form, created large repositories of databases and knowledge bases, designed ways to exchange data at long distances through ICT and the

Internet, which led to the emergence of a new interaction between people. Data and messages started to play the role of a product that can be bought and sold. The society of this type acquired the name of information society. Its main measurement has become a technological one. It was characterized by a massive output of data and knowledge of the type "how to act" within the framework of the so-called "knowledge economy". The main objective of this economy was to use the latest knowledge and ICT to create new technological innovations, converting them into new products and services and generally increasing their added value throughout the economic chain - "from idea to product or service." This society started to ensure high economic growth of individual countries and multinational companies, but did not guarantee the quality and safety of life of its members" (Zgurovskyi).

Developed countries and large multinational companies have adopted the powerful productive forces which employed the knowledge of the type "what to do" to their further enrichment. This has led to further increase in the gap in incomes between the richest and poorest countries (in 1973 the gap was determined by the ratio of 44: 1, and at the beginning of the XXI century the gap increased to 72: 1) (Zgurovskyi).

This type of development of society leads to the widening gap between developed countries and the rest of the world, between different population groups within countries - rich and poor, young and elderly, healthy versus disabled. This phenomenon is known in the form of three types of inequality - economic inequality, inequality of knowledge and digital divide.

A characteristic feature of society in mid 90s of last century was a rapid change in machinery and technologies due to the systematic use of scientific knowledge. The researchers note: "The success of our industrial society in the development of science, technical and technological innovations to improve the lives of people in its victorious course of the entire planet gave rise to the idea that it is the mainstream of human development. Even fifty years ago, few imagined that the same line of technological progress and its system of values will lead humanity to critical boundaries that civilization reserves of this type may be exhausted. It was only in the second half of the twentieth century, when deep crisis invoked critical attitude towards past ideals of progress" (Stepin, 1994).

The emergence of global crises in modern society is associated with the dominance of technocratic views and technocratic way of thinking. Technocratic thinking is not an essential feature of all representatives of science and technical knowledge in particular. It may be inherent in political figures as well as representatives of the arts and humanitarians. Technocratic thinking is a world view, essential features of which are supremacy of means over purpose, purpose over meaning and universal interests, meaning over existence and reality of the modern world, technology over human beings and their values. For technocratic thinking there are no categories of morality, conscience, human feelings and dignity" (Zinchenko, 1994).

Mankind has long sought to coexist with nature in a disharmonious way, trying to adapt nature to the needs of technocratic society, "to correct nature by technology" that led to the global environmental crisis on the planet. Among the many technical solutions planned by humanity without a sound humanitarian expertise attempts have been made to "improve" human beings by technology (implantation of microchips in human body with a view to its improvement, replacement of patients` ill body organs by technical devices, etc.) which can lead to loss of human nature by man and the violation of its vital foundations.

Representatives of anti-science trends that impose on science and its technological applications responsibility for the growing global problems, question the traditional values of

modern society - science, scientific rationality, scientific and technological progress. However, the search for solutions to global problems must not be associated with the departure from science and its technological applications, but with the rejection of technocratic thinking, change in the type of scientific rationality, search of new forms of interaction of science with culture; the need for humanization of scientific and technological development, giving a human dimension to it; the need for unity of humanitarian and nature science knowledge; the possibility of a new synthesis of science and morality (Zgurovskyi, Zinchenko , 1994; Kagan , 1997).

This leads to the establishment of other forms of human interaction with the world which are different from the technocratic ones, when the rule of monologue changes to dialogue. Axiological and ethical principles that govern relations not only between individuals but also between them and the natural processes that previously were characteristic only of humanitarian knowledge begin to form.

There is an urgent need for best practices and compliance - both globally and within countries -with rules that would be political and economic instruments of social development for the benefit of the people, ensuring adequate quality and safety of their lives and would not reduce these fundamental values.

The concept of forming a new type of society appeared at the turn of the century, when information began to take on a qualitatively new form - harmonized knowledge. In addition to the knowledge of the type "what to do" the knowledge of "how to live" acquires more importance which contributes to the harmonization of internal and external contradictions of society. This form of society enabling people to generate new knowledge on a massive scale through such powerful tools as modern ICT is called knowledge society (a society that is based on knowledge, or K-society).

The society of this type has acquired radically new measurements, including, apart from technological, social, ethnic, economic and political ones. Its integral components are new interdisciplinary knowledge that is generated by academic and public institutions, training of high-quality professionals that is provided by education, creation of additional wealth on the basis of the knowledge economy and formation on this basis of integral vector of social development aimed at improving the safety and quality of life for all its members.

Manufacturing and market use of new interdisciplinary knowledge gain independent and very important meaning. Changes to national and international institutions of social protection, civil society, protection of intellectual property are beginning to evolve. This society began to significantly change the structure of work, labor relations, social protection and employment. There is a new social environment in which along with the matter and energy, information and scientific knowledge have become important productive factors. A clear political vector of K-society aimed at achieving a high level of quality and safety of human life on a national and global scale has emerged.

To determine the qualitative and quantitative characteristics of the K-Society and its fundamental conditions the Index of K-Society (Ik) worked out by the UN for its members is used. This index is defined by three main dimensions:

— The index of intellectual assets of society (IIA) which is formed with the help of such indicators as full time school education in the country, the number of young people under 15 that receive education, the level of availability of information to population through ICT and media, including the Internet, telephone communications, newspapers and magazines;

— The index of perspectives for the development of society (Ipres) that is defined by public expenditure on health, research and innovative development of the country, reduced defense spending, the number of children per teacher in elementary school, the level of freedom from corruption;

— The index of the quality of development of society (QDI), which describes the quality and safety of human life, considering factors such as the infant mortality rate (the indicator that characterizes the poverty and marginalization of society).

Thus, among the most important scientific, technical and socio-economic problems today there is a particularly urgent issue of informatization – that is the creation of the system of efficient provision of timely, credible and exhaustive information and data to all kinds of socially important human activities, conditions for prompt, thorough and comprehensive analysis of the investigated processes and phenomena, forecasting their development, predicting the consequences of decisions. Their solution is inseparable from the problems of informatization of education system that, on the one hand, reflects the current level of scientific, technical and socio-economic development of society and depends on it, but, on the other hand, makes it essential. However, all kinds of problems are emerging which are at first glance incompatible with the wide use of information and technical means – that is the issue of humanitarian character of education and humanization of the learning process and social relations in general

But, given the fact that one of the major humanitarian issues are communication problems, access to knowledge, selection of optimal variants of behavior, management of technical and social processes, monitoring of conditions, conservation and environmental protection, social improvement etc. it is the informatization and powerful technical equipment that significantly contribute to the humanitarian nature of education and humanization of the teaching process (Zhaldak, 1989; Ramskyi, 2013; Ramskyi, 2015).

Conclusions and suggestions

Knowledge in the information society is becoming the most important factor of social development which is reflected even in the title of its highest form - "knowledge society" or "K-society." The society of this type acquires radically new measurements including, apart from technological, also social, ethnic, economic and political ones. Its integral components are the training of competent, highly cultured professionals, the creation of information resources and additional benefits aimed at achieving a high level of quality and safety of human life, both on the national and global scale. Manufacturing and market use of new interdisciplinary knowledge gain independent and extremely important meaning. In this connection the role of methodological, systematic, interdisciplinary human knowledge necessary for rational and conscious management of various knowledge and data to address new and unusual problems is significantly increasing. The need for the formation of educational models of knowledge society sets before the science and practice new tasks which are not fully understood yet.

The era of information creates its own problems, and not only technical but also ecological, social, economic and political ones. To solve these problems holistic philosophy of understanding is needed. It is necessary not only to investigate the formation of "information society", but above all to get rid of so-called "technocratic" thinking and find ways to direct

the process of informatization for the benefit of all countries and peoples, and not to the evil of humanity, to the full development of human personality and not towards their enslavement.

Formation of man as a new member of knowledge society can only take place under the necessary condition - society must recognize and acknowledge the greatest moral values: freedom, decency, education, honor, conscience, patriotism, supremacy of law, man-centrism, democratic principles of the way of life and social development.

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