WISDOM

3(16), 2020

YEREVAN – 2020

Natalya IVANUSHKINA,

Olga DONINA,

Irina ARYABKINA,

Galina ZHARKOVA,

Julia CHERNOVA,

Natalya GALIAKHMETOVA

PHILOSOPHICAL AND HISTORICAL ASPECTS OF THE PROBLEM OF THE FORMATION OF THE INFORMATIONAL-EDUCATIONAL SPACE

Abstract

The purpose of this article is to analyze philosophical and historical approaches to the problem of the formation of the informational-educational space in connection with the emerging social need for a wider use of informatics tools for the formation, storage and use of various types of socially significant information.

Based on historical analysis, the authors disclose the essential-meaningful characteristics of the concepts of "informatization" and "education" when interpreting the latter as a leading human-forming function; substantiate pedagogical conditions that can act as a qualitative characteristic of an integrated system that allows synthesizing the possibilities of traditional and modern-media approaches to the process of studying at a university, implementing their principles and resources.

The study was based on methods of theoretical analysis of the provisions of philosophical, historical, pedagogical, sociological, cultural science, as well as a set of justified and reliable information in the research practice of methods: retro-specific analysis of domestic and foreign experience in the use of cotemporal information technologies; theoretical methods (comparison, analogy, analysis, synthesis, abstraction, concretization, classification).

Keywords: educational space, informatization, digitalization, informational-communicational technology, information society.

Introduction

The main feature of the last decade is the constant improvement of information and communication technologies, which are firmly established in all spheres of human activity, affecting the fundamental values of society and civilization as a whole. The process of Informatization has led to the emergence of a "society of global competence", which is characterized by an unstoppable growth in the volume of knowledge generated in the world community. The result of the introduction of digital technologies in the second half of the XX century led to a revision of views on the information society, making them inadequate at the beginning of the XXI century.

All this points to the need for a more thorough analysis of the terms "information society", "knowledge society", "Informatization", "Informatization of education" and the related problem of forming an informational-educational space in the philosophical and historical aspect.

The absence of a philosophical and historical justification for these concepts demonstrates the contradictions of the formed theory, which has, on the one hand, a recognized scientific status, and on the other, abstract objects that describe it. The analysis of scientific literature has shown that in the modern information society, narrow technological justifications for the use of information and communication technologies and their role in the transition of the information society to the knowledge society have been seriously criticized and practically rejected. In this regard, attempts were made to consider this transition from the "position of social shifts and their interrelation, placed in historical retrospect" (Lukina, 2013, p. 9).

The actualization of the problem of studying the philosophical and historical aspect of the formation of the information society, the knowledge society, and the associated educational information space, is associated with the need to develop an essentially meaningful characteristic of the concepts of "informatization" and "education", highlighting the latter as the leading human-forming function.

Theoretical Framework

The emergence of the term "informatization" in 1978 was dictated by the increased social need for wider use of informatics for the formation, storage and use of various types of socially significant information. In Russian literature, one of the first to use this term in 1987 was

A. I. Rakitov. He considered informatization as a process in which "social, technological, economic, political and cultural mechanisms are not just connected, but literally fused, merged together. At the same time, it is a process of progressively increasing use of information technologies for the production, processing, storage and dissemination of information" (Rakitov, 2013, p. 34).

Today in the Russian-language professional literature, there is no clear understanding of the term "informatization". This is due to the multidimensionality and complexity of the process itself, which covered almost all representatives of Russian society.

Studying the approaches of Russian scientists to the definition of the essential and meaningful characteristics of the category of "informatization", we found three key points. First, it is the presentation of informatization as a process. Secondly, this process is aimed at increasing the efficiency of using the information in society. And thirdly, it will be carried out using advanced information technologies.

In Russian legislation, the definition of the term "informatization" was formulated in the Federal Law No. 149-FZ of June 27, 2006 "On Information, Information Technologies and Information Protection", where informatization was defined as "... organizational socio-economic and scientific and technical the process of creating optimal conditions for meeting information needs and realizing the rights of citizens, government bodies, local governments, organizations, public associations based on the formation and use of information resources"[1]. This definition is widely used in the scientific literature and is positively assessed by most researchers. It is

---

[1] "On information, information technology and information protection": Federal Law of June 27, 2006 No. 149-FZ (as amended in 2014). Retrieved 21.08.2018 from: https://rg.ru/2006/07/29/informacia-dok.html.

considered extremely important that informatization is viewed as a process of development of the whole society, which is of national importance.

Historically, the philosophical concepts on the development of society "formation" (K. Marx) and "civilizational" (A. Toynbee, K. Danilevsky) were the first to emerge. K. Marx took the development of production and economic relations as the basis of his theory. The basis of the "civilizational" concept of the development of society was its sociocultural types.

At the end of the 50 and the 60s of the XX century, one of the most authoritative socio-philosophical theories was the concept of D. Bell, which at its core contained a futurological description of the upcoming social structure, which was supposed to help overcome the crisis of the 70s of the XX century more gently and painlessly. The author formulated promising directions for the development of industrialism in the process of its transition to its next phase - post-industrial. D. Bell, comparing pre-industrial, industrial and post-industrial societies, revealed the qualitative changes that took place in their structure. The author argued that "the structure of society is not a mould of social reality, but a conceptual scheme" (Bell, 2004, p. 3). Defining the nature of the new, post-industrial system, he pointed out that it is becoming characteristic of a change in knowledge itself, and not "a transition from property or political criteria to knowledge as the foundation of the new power" (Bell, 2004, p. 5). He spoke about the progressive change in society, directly related to the improvement of computer modelling of various processes. His concept recognized the fact that knowledge and information are the "axis of modern society" (Bell, 2004, p. 5). Later, D. Bell abandoned the concept of "postindustrial society" in favour of "informational". The nominative shift that D.

Bell made in his studies ("The Coming Post-Industrial Society" (2004)) outlined the direction of the transition from pre-industrial to industrial, and then to a post-industrial society, and from it to the knowledge society, not only as to forms of movement of social reality but as objects of scientific analysis.

D. Bell's concept was supported by E. Brzezinski, O. Toffler. Considering social development as a "change of stages", they associated the formation of the information society with the dominance of the "fourth", information sector of the economy, following three well-known sectors - agriculture, industry and the service economy. At the same time, they argued that capital and labour as the basis of industrial society are giving way to information and knowledge in an information society (Brzezinski, 1992; Toffler, 1982, p. 106).

The views of D. Bell, Z. Brzezinski and O. Toffler have caused a wave of responses and many-sided criticism. This served as an impetus for discussions about the relationship between industrial, post-industrial and information society, which are not completed today. The French representatives of the sociological school S. Nora and A. Mink were sceptical about the claims of the post-industrial society described by D. Bell. They defined it as an advanced industrial. These scholars pointed out that "the postindustrial approach is productive concerning the information that controls the behaviour of producers and buyers, but is useless when faced with problems that depend on the cultural model" (Nora & Minc, 1980, p. 133).

The further analyses of the development and formation of the information society evidence that it is important to mention the representation of the post-industrial society through information technology by the Spanish sociolo-

gist Manuel Castells. His scientific works can be attributed to the research of that part of scientists who turned to the study of the problem of social development back in the 80s of the XX century. Defining the essence of the concept of "informational society" (informational) and separating it from the "information society", the sociologist argued that information and knowledge should act as the main source of productivity. A distinctive feature of such a society, according to M. Castells (2001), should be their network logic of structure (p. 9). According to the researcher, the modern world is characterized by the blurring of boundaries between the concepts of "state" and "sovereignty", which is associated with the strengthening of world globalization. M. Castells (2001) saw in this the prospect of the emergence of a new form of state (which awaits us shortly), - a network state, "whose dynamic expansion gradually absorbs and subordinates the pre-existing social forms" (p. 505). The sociologist argued that the main directions of geopolitics would be concentrated in the "hands" of the media, and, accordingly, in the relationship between power within oneself and the people, there will be a direct dependence on the management of communication processes.

M. Castells (2001) stated: "...information and its exchange accompanied the development of civilization throughout the history of mankind and has always been of critical importance". At the same time, the emerging and developing "information society" is seen as such that "the generation, processing and transmission of information have become fundamental sources of productivity and power" (p. 91). "...In the new, informational way of development, the source of productivity lies in the technology of knowledge generation, information processing and symbolic communication. Of course, knowledge and in-

formation are critical elements in all modes of development, since the production process is always based on some level of knowledge and information processing. However, specific to the informational way of development is the impact of knowledge on knowledge itself as the main source of productivity" (Castells, 2001, p. 39).

The concept of "information society", developed by M. Castells, undoubtedly continues the idea of K. Marx about production systems and production revolutions, but at the same time, it is unique. He introduces and defines the concept of "information economy", constantly using it in conjunction with the concept of "global economy". This, in his opinion, is the indisputable result of the revolution in the field of information technology. He noted that the material basis of the globalization of the economy is the global network, constituting its economic system. In this regard, as the author argued, "new information technologies are not just a tool for application, but also processes for development" (Castells, 2001, p. 22). M. Castells argued that "technology is society, and society cannot be understood or described without its technological tools". As such a technological tool, the scientist considered the so-called "topological configuration" - a network that will be materially supported by new information technologies. He noted that network logic is necessary for "structuring the unstructured while maintaining flexibility at the same time because the unstructured is the driving force of innovation in human activity" (Castells, 2001, p. 21).

In addition, the sociologist clearly identified the technological tools that would contribute to the development of his concept of an "information society". Among them, he named, constantly using the word "new", emphasizing their progressive nature, telecommunication networks,

powerful desktop computers, software that can adapt to new conditions, as well as "new mobile communication devices that communicate with any one place at any time; new workers and managers interact around work tasks and results, able to speak the same language - digital language" (Castells, 2001, p. 39).

K. Jaspers (1986) and M. Heidegger (1993), being representatives of the "civilizational approach", considered the phenomenon of technology, defining its place in various philosophical schools and directions. For the most part, they are similar in defining the functional purpose of technology as "the ability to use tools of labor" (Jaspers, 1986, p. 12). However, at the same time, they have observed significant discrepancies in defining the essence of technology, in determining the reasons that "gave rise to technology" (Heidegger, 1993, p. 33).

Thus, K. Jaspers in his work "The Origins of History and Its Purpose" carried out a philosophical analysis of the essential concept of technology, endowing it with "reason" ("technology rests on the activity of reason, on calculus in combination with the foresight of possibilities and guesswork") and "Power" ("using the force of nature against the force of nature, technology dominates nature through nature itself"). Functionality he saw in "making life easier, reducing the effort spent on ensuring physical existence, etc.". The meaning of technology, therefore, consists in "liberation from the power of nature" (Jaspers, 1994, p. 117).

In his other work "Modern Technology" K. Jaspers investigated the reasons for the emergence of the "technicist" civilization of our time, highlighting it as a special type. The author notes that such a sharp change occurred due to the emergence of machines as a mediating link between man and nature. From the point of view of

the scientist, this made it possible to change the psychology of people and prepare them, thus, for a new historical round of development of society (Jaspers, 1986, p. 127).

This understanding of the role and essence of technology, from the point of view of K. Jaspers, should undoubtedly lead to its distorted understanding. The philosopher called this "demonism" while expressing a warning about getting out of the control of the technosphere man as a whole. Developing the idea of K. Jaspers about the "uprising of machines" and considering the issues of its "overcoming" M. Heidegger presented technology as a specific "kind of disclosure of secrecy" with its own features, characteristic only for it.

"Getting out of the secrets that captures modern technology is of the nature of providing in the sense of extractive production. It happens in such a way that the energy latent in nature is extracted, the extracted is processed, the processed is accumulated, the accumulated is again distributed, and the distribution is again transformed. Extraction, processing, accumulation, distribution, transformation - types of removal from secrecy" (Heidegger, 1993, p. 227). It is not difficult to guess that only a person can get out of the state of "secrecy", but the philosopher said that he (a person) "does not dispose of" what is manifested through his activity. Something manifests itself through a person, but is not generated by him. This "something" is Heidegger's (1993) famous concept of "post" (p. 227), which is understandable only to him as a kind of organizing principle. It follows from this that M. Heidegger presented science and technology as a manifestation of the same way of being given to the human world, in contrast to K. Jaspers who observed science as a prerequisite for the development of modern technologies.

J. Baudrillard (2000), examining the changes taking place in society, said that they are due to the "end of the social". "The modern revolution is a revolution of uncertainty" (p. 63).

He argued about a complete change in the concepts of "meaning", "knowledge", etc. "Communication is now not a conversation itself, but what makes one speak. Information is not knowledge, but what makes you know. The prospects for knowledge are illusory since the excess of knowledge is indifferently scattered over the surface in all directions" (Baudrillard, 2000, p. 69).

An analysis of the works of scientists (J. Baudrillard, J.-F. Lyotard, etc.), who dealt with human problems in the information space, allowed us to conclude that they considered the information society as a philosophical model based on historical, economic, cultural and psychological facts. The information society acts as a new form of civilization existence. Scientists viewed it as a logical continuation of a dynamically developing industrial civilization. It is also necessary to pay attention to the fact that the inevitability and legitimacy of the onset of the information society were noted by the majority of researchers, but statements about the consequences that are both social, cultural, and psychological, pedagogical in nature differ.

However, analyzing the concepts of human society development, examining the statements of scientists, their assumptions and conclusions, it is possible, nevertheless, to single out a number of general characteristics to which they turned their attention. Namely, they pointed out that:

- firstly, the entire path of development of society can be divided into three periods, three main components. These are pre-industrial (agricultural), industrial and post-industrial periods;

- secondly, depending on what was taken as the basis for the development of society - production relations, or it was the relationship between man and nature, it was possible to draw boundaries between the named periods of the historical development of society;

- thirdly, the scientific and technological revolution preceded the transition to each subsequent period. This, naturally, significantly influenced the human environment, transforming it, causing dramatic changes in the consciousness of society;

- fourthly, almost all philosophers are unanimous that the final stage in the development of society is the "information society"; however, their views differ in terms. Some believed that it had already come, others that it would come shortly.

Further discussions on the stages of development of society allow noting that the information society is also characterized by phasing. Its initial period is based on the formation of industrial relations through technology (personal computers, production automation), and it is also characterized by technical equipment and development by representatives of the information society, its implementation in all spheres of their activity. We believe that this period has been successfully passed. The "society of machines" is being replaced by a "knowledge society" or otherwise "a society based on knowledge".

This approach emphasizes their significance rather than negating their presence. The presentation of scientific knowledge, its acquisition, storage, processing and transmission in the form of texts, appeared almost simultaneously with the ancient writing system. However, in recent decades, the factor of production, which characterizes a new type of economy associated with the

need for the constant growth of knowledge, has become increasingly apparent. So, according to A. A. Samarsky, the dynamic development of information and communication technologies has become firmly embedded in all spheres of human activity, which has significantly affected the methods of scientific research, as well as teaching and broadcasting of scientific knowledge. Here, the authors refer to a fairly new method of scientific research – mathematical computer modelling, which is an inevitable link of scientific and technological progress (Samarsky, 1997, p. 34).

The basis of the concept of the knowledge society, as scientists believed, are the following components: spiritual and intellectual development, democratic values, self-development of the individual, new forms of solidarity. The thesis about the long-term development of modern society at the intersection of science, economics, politics and education is the ideological basis of the concept.

The social paradigm demonstrates the transition from an information society to a knowledge society based on a new technological approach. The role of knowledge is defined by two aspects, first, as a factor contributing to the development of humanity as a whole through the acquisition of individual independence, and second, as a conscious need and opportunity for an individual to find, process, transform, distribute, and use information in order to apply the acquired knowledge necessary for the development of humanity as a whole.

The knowledge society has set itself the task of developing critical and theoretical cognitive abilities, as well as creative abilities as the most common and renewable resources of the individual. To do this, it is necessary to expand its rights and opportunities in the space of integration, solidarity and participation, that is, to achieve a dialogue of cultures and new forms of democratic cooperation that promote their mutual understanding.

Knowledge is not limited to technological access to information, but seeks to acquire a methodological significance, leads to knowledge, analysis, exchange, criticism, based on scientific and philosophical ideas, with a view to producing new knowledge based on information flows. This should contribute to the formation of a knowledge society as a synthesis of the achievements of the information society, the economy based on them, that is, a learning society, learning for all throughout life (Lukina, 2013, p. 23).

At this stage of the development of the information society, we are talking about the knowledge of the organization and the knowledge of people, who are increasingly called "knowledge" boots. In such a society, preference is given to a high level of employee education, the availability of various types of knowledge - scientific, practical (the ability to successfully solve standard and non-standard tasks), the development of creative abilities, critical, productive thinking, a wide outlook, the ability of organization and self-organization, readiness for both individual and collective creative activities, etc. The main task of a "knowledgeable" employee is to search, understand, analyze information, translate it into knowledge, apply this knowledge in practice, understand them and disseminate it in the professional community (Ivanova, 2011, pp. 9-10).

Enterprises and firms are seen as special organizations with knowledge of how to "create things". Companies were perceived as a manageable set of opportunities, the effective use of which at the moment depended only on the available knowledge, cognitive and social skills

of their employees. It is the knowledge that is provided due to a change in productivity with the equality of other resources. It is no coincidence that the terms "knowledge management", "human capital", "human potential" have arisen. The effective use of human intellectual "assets", which provide competitive advantages in all areas of the economy, is being addressed.

Knowledge becomes a strategic resource, the basis of society, the most important factor in its economic growth. Moreover, education, thus, turns into a direct productive force, creating the base of the economy of the information society. Moreover, unlike other resources (for example, oil, gas) in the process of use, the "knowledge" resource is not exhausted, but increases. When transferring knowledge, the teacher does not lose it, and students acquire it. Thus, the total amount of knowledge is constantly increasing (Ivanova, 2011).

The information society marks the transition from a traditional economy to a knowledge-based economy, from paper-based information media to paperless (digital) technologies for processing it. Nevertheless, not only the technological component is the criterion of a formed information society. Spiritual values that ensure the progress of society and the positive personal development of its members continue to be a significant characteristic (Gasumova, 2011, p. 10).

Describing the process of self-development of the individual, applying the definitions of the concepts of "socialization" and "culture", we will, in fact, attribute them to the basic ones for education. Socialization, in its broad sense, considers the innovation of the individual, of course, in interaction with society. At the same time, the concept of "culture" is a characteristic of the process of interaction of the individual with culture and, as a result, the formation of his own person-

al culture. It is clear that "culture" is part of "socialization". Education, having and determining social significance, is, as L. A. Stepashko (2002) points out, "socio-cultural education, the formation of a person - that is, his entry into society and culture - is carried out precisely in education as a socio-cultural institute" (p. 21).

B. Simon in the late 80s of the XX century, revealed the relationship between education and society, which found and finds its confirmation in practice. He wrote: "Society and education are integral to each other, show this interdependence, indicating the well-being or decline of the country's economy" (Simon, 1989, p. 21). Digitalization of society has created the conditions for "learning without borders", changing the attitude to professional training and the readiness of future specialists for professional activity. The transition to a knowledge society, which was being carried out in the modern Russian State, undoubtedly spoke of economic changes in the country. And this confirms practice. The stage of mass computerization has ended (from our point of view). Society and, accordingly, education, went to the next stage (or sub-stage). It had adapted to new economic, technological and social conditions.

In this regard, two approaches can be distinguished that determine the phenomenon of education: firstly, as a "channel for broadcasting cultural property" (J. Allak, V. I. Garaja, V. A. Lectorsky, K. R. Rogers and others) and secondly, as a utilitarian-pragmatic phenomenon (Stromquist, Monkman, Gibbons, Burbules, Torres).

Representatives of the "cultural and value" approach believe that the person herself is a culture. Personality learns the previous experience of being in the form of knowledge, values, etc., understanding it, analyzing and reproducing it as

its own product. "The knowledge that you have personally obtained is the truth", said C. Rogers (1994), and it cannot be accepted (p. 336). Consequently, the person who has obtained such values is the owner of the truth, that is, the culture itself (in the sense of the totality of sign-symbolic systems), itself becomes part of a culture, its creator. Development, education and culture are creative processes driven by the desire for new meanings.

From our point of view, these two directions are quite peaceful in modern society, logically complementing each other. The "cultural and value" approach enriches the "pragmatic" with spiritual and moral values, and the "utilitarian and pragmatic" with its rationality expands the educational horizons, clarifying the existential and personal foundations of education.

Considering the ambiguity of the interpretations "informatization of education", at least four approaches can be noted. The representatives of the first (S. I. Osipova & T. V. Solovyova) believe that "this is the process of providing the sphere of education with a methodology for the development and use of information and communication technologies aimed at achieving the goals of education and education" (Osipova & Solovyova, 2014, p. 52). This process is characterized by the use of computer-oriented methodological systems on different learning stages, the use of information technologies, which, in turn, are an integral part of computer-oriented educational systems.

Through the introduction of information technologies, the educational process becomes more individualized, and, as S. I. Osipova and T. V. Solovyov point out, it is more effective. The skills and skills of working with telecommunication means, from the point of view of scientists, increase the motivation for the educational process, increasing its effectiveness. At the same time, information and communication technologies make it possible to organize different interaction of all participants in the educational process, turning the transfer of knowledge into joint educational activities, thus making the student an active subject of these activities, providing an opportunity to manifest his or her creative potential (Osipova & Solovyova, 2014, p. 52).

The representatives of the second approach (A. I. Zhuk (2006, pp. 12-25), E. L. Fedotova and A. A. Fedotov (2010, pp. 50-106) consider informatization of education as "a systematic work on the introduction of information technologies in all types and forms of educational practice, on the revision of existing ones on this basis and the introduction of new educational models" (Zhuk, 2006, p. 43).

E. L. Fedotov and A. A. Fedotov clarify the definition that which is found in the research of A. I. Zhuk. They refer to "informatization of education" as a focused effort to develop and implement information and communication technologies:

- in the educational process to prepare citizens for life and activity in the modern information society; Improving the quality of general education and training through the extensive use of information and communications technology;
- management of the education system to improve the efficiency and quality of management processes;
- in methodological and scientific-pedagogical activities to improve the quality of work of teachers, development and introduction of new educational technologies based on the use of information and communication technologies (Fedotova & Fedotov, 2010, p. 106).

The third approach in determining the essence of the concept of "informatization of education" (V. G. Magomedov & I. V. Robert) brings us to the intellectual analysis of the activities of participants in the educational process. I. V. Robert sees "informatization of education" as a process of providing the field of education with a methodology and practice of developing and optimizing the use of modern information technologies focused on the analysis of the psychological and pedagogical goals of education. In connection with this interpretation, from the author's point of view, this process can be a starting point for improving the mechanisms for managing the education system through the use of automated databases of scientific and pedagogical information, information and methodological materials, as well as communication networks. I. V. Robert (2010) notes the need to ensure synergy of pedagogical impact as a result of the combined action of its constituent factors and (or) influences, in which the total effect exceeds the effect exerted by each of them in terms of diversity. The result of this phenomenon is the pedagogical effect on the trainee of a longing character (p. 133).

Another point of view on the studied issue belongs to V. V. Grinshkun (2010), who proposes to consider "informatization of education as the activity of teachers aimed at providing education with objective, reliable, relevant information and means of processing it" (p. 84).

Analyzing the possibilities of informatization of education, we highlight its positive aspects related to improving the quality of education. As S. I. Osipova and T. V. Solovyova (2014) point out, these are:

- a systematic approach in the organization of the educational process. In this regard, scientists present the content of educational material in the form of hook-linked modules, built taking into account a certain structural logic;
- the openness of the educational process, as well as its flexibility in relation to students. Here, researchers represented all significant components of the latter (social and cultural differences, individualization and differentiation of the educational process);
- intensification of the educational process;
- interactive training;
- use of a competent approach in order to develop the competitiveness of a university graduate;
- the ability to form a continuous education system in unified, common information space;
- the ability to organize students' independent work in an information environment;
- visibility and visualization of the content of the training discipline (pp. 52-53).

Naturally, scientists who study the process of informatization of education distinguish its negative aspects, and some, trying to warn, identify the risks that accompany this process. So, N. V. Gafurova (2007) identifies as risks, for example, "dehumanizing relations in the educational system, as well as replacing reality with its surrogate virtual model" or "permissiveness in the virtual world" (p. 34). All this, accordingly, poses requirements for the technological support of the educational process, for the reasonable use of multimedia facilities in classes, for the creation of psychological and pedagogical conditions for comfortable work with information, for minimizing the negative consequences associated with the introduction of information technologies, with the possibility of you-building interactive interaction in the informational-educational space. The organization of such an educational

process may be a possible option for the transition from an information society to a knowledge society.

By defining the characteristics of the modern knowledge society, it can be argued that the process of creating an informational-educational space is successful. The attributes of a "society of global competence" that contribute to the formation of an informational-educational space can be:

- information infrastructure containing transborder information and communication networks and information resources distributed in them as a stock of knowledge;

- mass use of computers connected to networks;

- the readiness of members of society to work on personal computers in cross-border information and communication networks;

- new forms and activities in cross-border information and communication networks;

- prompt receipt by any representative of society of reliable and accurate information through cross-border information and communication networks;

- creation of multimedia as a single media medium;

- the possibility of unlimited communication between the various States parties to cross-border information and communication networks;

- the establishment of a unified international legal and regulatory framework governing the activities of participants in cross-border information and communication networks.

The creation and improvement of the information education sector directly affected the sphere of education, changes in which entailed the transformations taking place in the country's economy since society and education were integral to each other. A new social order presented by society to the educational system is being formed. In modern young people, communicative skills, critical and systemic thinking, project thinking, social responsibility, self-development and self-realization, the ability to work in a team, creative potential, information and multimedia competence, professional and psychological and pedagogical competence are in demand and appreciate. This is possible when creating pedagogical conditions that can act as a qualitative characteristic of an integrated system that allows synthesizing the capabilities of traditional and media approaches in pedagogy and psychology to the process of education at a university, implementing their principles and resources.

Results

In our study, we highlighted the substantive, organizational and operational-competent pedagogical conditions for improving the informational-educational space. One of their means of implementing substantive and organizational pedagogical conditions is the development and implementation of an integrated course "Psychology and Pedagogy", within the framework of which lecture, practical classes and an independent study of students in preparation for future professional activities acted as traditional forms of organizing the educational process.

Students of 6 universities of the Russian Federation took part in our study. We found out that the pedagogical conditions developed by us in the study affect the formation of components of psychological and pedagogical competence of higher school students: motivational and value, information-cognitive, emotional-will, creative.

Conclusion

Thus, the analysis of the results obtained during the study showed the positive dynamics of all components of the psychological and pedagogical competence of students in the informational-educational space of higher education. The philosophical and historical analysis of the problem under study shows that education in the information society and knowledge society acquires a new quality due to the availability of modern technical means, information and communication technologies and the informational-educational space, which create favorable conditions and a wide range of opportunities for each person to receive, process, preserve and use information in the volume that he needs for self-development, self-education and self-improvement. The integration of the educational process and the informational-educational space requires the presentation of a single integrated pedagogical system with its inherent traditional and innovative elements.

The prognostic potential of the study lies in the fact that it, contributing to solving an important pedagogical and socially significant scientific problem - the development of the concept of an integrated system for the formation of psychological and pedagogical competence of university students, opens a new direction of scientific searches related to the theoretical and methodological support of the process of transition of the information society to the knowledge society.

References

Baudrillard, J. (2000). *Prozrachnost' Zla* (Transparency of Evil, in Russian). Moscow: Dobrosvet Publishing House.

Bell, D. (2004). *The coming post-industrial society. Experience in social forecasting* (The coming post-industrial society, in Russian). Moscow: Publishing House "Academia".

Brzezinski, Z. (1992). *Mezhdu dvumya vekami. Rol' Ameriki v eru tekhnotroniki* (Between Two Centuries. The Role of America in the Era of Technotronics, in Russian). Moscow: Progress Publishing House.

Castells, M. (2001). *Informacionnaya epokha: ekonomika, obshchestvo i kul'tura* (Information Age: Economics, Society and Culture, in Russian). Moscow: Publishing House of the State Institute of Higher School of Economics.

Fedotova, E. L., & Fedotov, A. A. (2010). *Informacionnye tekhnologii v nauke i obrazovanii: ucheb. posobie* (Information Technologies in Science and Education: Textbook, in Russian). Moscow: FORUM Publishing House INFRA-M.

Gafurova, N. V. (2007). *Riski informatizacii obshchestva v kontekste socializacii podrastayushchego pokoleniya* (Risks of Informatization of Society in the Context of Socialization of the Younger Generation, in Russian). *Education and socialization of the individual in modern society: Materials of the 5th All-Ros. Scientific Conference (pp. 30-38).* Krasnoyarsk: KSPU Publishing House.

Gasumova, S. E. (2011). *Informacionnye tekhnologii v social'noi sfere: uchebnoe posobie* (Information Technology in the Social Sphere: Textbook, in Russian). Moscow: Dashkov and K Publishing and Trading Corporation.

Grinshkun, V. V. (2010). *Informatizaciya obrazovaniya kak napravlenie podgotovki pedagogov* (Informatization of Education as a Direction of Teacher Training, in Russian). *Bulletin MGPU Series "Informatics and Informatization of Education", 1*(19), 78-89.

Heidegger, M. (1993). *Vremya i bytie* (Time and Being, in Russian). Moscow: Science.

Ivanova, E. O. (2011). *Teoriya obucheniya v informacionnom obshchestve* (Theory of Learning in the Information Society, in Russian). Moscow: Publishing house "Enlightenment".

Jaspers, K. (1986). *Novaya tekhnokraticheskaya volna na Zapade* (New Technocratic Wave in the West, in Russian). Moscow: Progress Publishing House.

Jaspers, K. (1994). *Smysl i naznachenie istorii* (The Meaning and Purpose of History, in Russian). Moscow: Progress Publishing House.

Lukina, N. P. (2013). *Ot informacionnogo obshchestva k obshchestvam znaniya: teoriya i praktika perekhoda* (From the Information Society to the Societies of Knowledge: The Theory and Practice of Transition, in Russian). *Humanitarian informatics*, *7*, 9-27.

Nora, S., & Minc, A. (1980). The Computerisation of Society. A Report to the President of France. Cambridge, L.

Osipova, S. I., & Solovyova, T. V. (2014). *Proektirovanie individual'noi obrazovatel'noi traektorii v usloviyakh informatizacii obrazovaniya* (Designing an Individual Educational Trajectory in the Conditions of Informatization of Education, in Russian). Moscow: INFRA Publishing House; Krasnoyarsk: Publishing house "Sib. Federal University".

Rakitov, A. I. (2013). *Filosofiya kompyuternoi revolyucii* (The Philosophy of the Computer Revolution, in Russian). Moscow: Publishing House Direct-Media.

Robert, I. V. (2010). *Sovremennye informacionnye tekhnologii v obrazovanii: didakticheskie problemy; perspektivy ispol'zovaniya* (Modern Information Technologies in Education: Didactic Problems; Prospects for Use, in Russian). Moscow: Publishing House IIO RAO.

Rogers, K. R. (1994). *Vzglyad na psikhoterapiyu. Stanovlenie cheloveka* (A Look at Psychotherapy. Becoming a Person, in Russian). Moscow: Publishing group "Progress", "Universal".

Samarsky, A. A. (1997). *Matematicheskoe modelirovanie: Idei. Metody. Primery* (Mathematical Modeling: Ideas. Methods. Examples, in Russian). Moscow: Publishing house "Science", "Fizmatlit".

Simon, B. (1989). *Obshchestvo i obrazovanie* (Society and Education, in Russian). Moscow: Progress Publishing House.

Stepashko, L. A. (2002). *Filosofiya obrazovaniya: ontologicheskij aspekt* (Philosophy of Education: Ontological Aspect, in Russian). Khabarovsk: KhGPU Publishing House.

Toffler, O. (1982). *Tret'ya volna* (Third Wave, in Russian). *USA - Economics, Politics, Ideology*, *2,* 7-15.

Zhuk, A. I. (2006). *Informatizaciya obrazovaniya kak sredstvo povysheniya kachestva obrazovatel'nyh uslug* (Informatization of Education as Means of Improving the Quality of Educational Services, in Russian). *Informatization of Education*, *2*, 3-19.