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Man of the information society: problems of formation and development

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Abstract

The purpose of the research was to reveal the process of becoming a person in the information society. The problem of personal formation in the modern conditions of growth of the role of information communication technologies becomes topical problems in the field of social studies. The volume of information, information resources and corresponding technologies significantly influence different sides of social life and processes of humans. The following methods were used in the study: analysis, synthesis, modeling, mathematical statistics and others. The tasks of the study included analyzing the approaches, ideas about the features of personality formation in the information society. It has been shown that the solution of this problem is associated with the formation of human information culture. The paper presents the process of perception of the essence of this category, as well as describes a number of concepts, the essence of which allows to specify the content of the concept of «information culture». These are the following categories: information, culture, information needs. Special attention was paid to the development of information needs in educational institutions.

Keywords: human person; information society; information culture, current society; training and development.

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El hombre de la sociedad de la información: problemas de formación y desarrollo

Resumen

El propósito de la investigación fue revelar el proceso de convertirse en una persona en la sociedad de la información. El problema de la formación personal en las condiciones modernas de crecimiento del papel de las tecnologías de comunicación de información se convierte en problemas tópicos en el campo de los estudios sociales. El volumen de información, los recursos de información y las tecnologías correspondientes influyen significativamente en los diferentes lados de la vida social y los procesos de los humanos. En el estudio se utilizaron los siguientes métodos: análisis, síntesis, modelado, estadísticas matemáticas y otros. Las tareas del estudio incluyeron analizar los enfoques, ideas sobre las características de la formación de personalidad en la sociedad de la información. Se ha demostrado que la solución de este problema está asociada con la formación de la cultura de la información humana. El trabajo presenta el proceso de percepción de la esencia de esta categoría, así como también describe una serie de conceptos, cuya esencia permite especificar el contenido del concepto de "cultura de la información". Estas son las siguientes categorías: información, cultura, necesidades de información. Se prestó especial atención al desarrollo de las necesidades de información en las instituciones educativas.

Palabras clave: persona humana; sociedad de la información; cultura de la información, sociedad actual; formacion y desarrollo.

Introduction

The modern stage of the development of civilization is characterized by the growing power of information and communication technologies, which is, in fact, a global information revolution, which in terms of scale and consequences is many times greater than the industrial revolution of the 19th century and the scientific and technical revolution of the middle of the 20th century.

Analysis of existing concepts of modern society shows their mainly economic orientation. It is called differently: "transitional", "informational", "informational civilization", "electronic", "collective mind", "cognitive", etc. One thing is certain, according to the information, the dominant status is recognized.

Information in its various forms exerts an increasingly powerful influence on all aspects of social life:

- more modern technique for the production, storage and distribution of information is created;
- new information environment emerges that allows optimizing the functioning of production, state bodies, management structures, educational, scientific, and cultural institutions;
- new information technologies are increasingly entering the everyday life of a person, modern information systems are becoming an increasingly essential and integral part of it.

However, human existence in the information society turns into existence in a super-symbolic reality. The orientation of the individual is complicated by the sharp increase in the amount of information that circulates in society and affects the individual. On the other hand, the infrastructure of the information society provides a person with significant opportunities for creative development in connection with access to all the diversity of knowledge and values that have ever existed, the use of which is possible only for a person with formed information needs and skills, which are included in the concept of information culture.

1. The aim of the study

To clarify the analysis of the problem of formation of personal characteristics of a person in the modern world. To reveal the content of basic categories and concepts. To justify the development of the information culture of society and to show the influence of information technologies. To carry out a diagnosis of informational influences on the process of development of the specified characteristics on the example of the ability to informational self-development.

2. Literary review

Philosophical, psychological, pedagogical study of the essential forces of the individual, the disclosure of personal potentials and ways of their effective use have long traditions - from the philosophy of the Upanishads to the works of modern scientists: Furman (2018), Nikitenko (2022), Maksymenko (2022) etc.

However, in the works of foreign and domestic pedagogues and psychologists, the aspect of personality formation in the conditions of informatization is only partially investigated.

So, the relevance of the problem of personality formation in the conditions of updating the information culture of society stems, on the

one hand, from the ontological significance of information in being, on the other hand, from the increase in the functional value of information in human life in modern society, in which information has become a system-forming value.

3. Research Methodology

The methodological basis of the concept of human development in the modern world at the philosophical level is: ideas of activity, the essence of a person, his role in solving social and personal problems, ideas of natural and social integrity, ideas about cognition and reflection of reality in human consciousness, epistemological functions of the modeling method; theory of developmental learning; psychological theory of activity; research of well-known domestic and foreign psychologists, teachers and methodologists regarding the patterns of the educational process.

The laws of the dialectic of unity and the struggle of opposites, the transition of quantitative changes into qualitative ones, the principles of objectivity, determinism, development, systematicity and interaction, which allowed: to reveal the dialectics of the pedagogical educational process leading to the realization of the concept of the development of social maturity; to identify contradictions, interrelationships of quantitative and qualitative changes inherent in the process of personality development; to investigate the regularities of the development of subjects of pedagogical education in the conditions of updating the information culture of society, taking into account the psychological regularities of all types of activities.

Consideration of the methodological foundations of research, as a set of sufficient conditions for cognition, thinking or activity, was carried out using a four-level methodological analysis. Methodological analysis as a method and an effective tool is carried out using thinking and general logical techniques (analysis and synthesis, abstraction, induction and deduction, analogy, modeling, etc.).

The following theories and concepts are the methodological basis of the organization of human activity in the information and educational environment:

- the theory of educational activity, according to which the assimilation of the content of education is carried out in the process of the person being taught, which contributes to the development of the personality;
- the concept of general didactic principles of higher education: scientificity, the connection of theory with practice, systematicity and consistency in the training of specialists, consciousness, activity

and independence of students in learning, the combination of individual knowledge search with educational work in a team, the strength of assimilation and availability of scientific knowledge.

The use of new information technologies expands the possibilities of activating cognitive activity, improving the set of general logical thinking techniques and the set of special techniques of mental activity, as well as increasing the effectiveness of teaching methods.

We have taken into account the conducted research on the use of machine learning opportunities during quarantine, in particular the opportunities of social networks.

The practical application of new information technologies can improve or even partially replace in the educational process such classic methods of teaching as methods of oral presentation of educational material (lecture, story, explanation, etc.), methods of visual and practical training, methods of consolidating acquired knowledge, methods of independent work.

4. Discussion of the problem

In modern conditions, information is considered as something independent, along with such categories as matter and energy. Thus, A. Ursul (Ursul, 2018) claims that information is not just a property, even an attribute of matter and all its systems, and plays a much more important role in the "life" of these systems, in nature in general. More and more facts and patterns that are being discovered testify to the priority of information over matter and energy. The scientist also notes that increasingly replacing material and energy resources, or significantly supplementing them, information helps to fundamentally change the entire structure of social activity.

The most general definition of the term "information" is given by philosophers, who define it as "... the reflection of diversity in any objects and processes of animate and inanimate nature" (Kyridon, 2019, 78).

For the entire time of its existence, humanity has produced enormous spiritual and material values in the form of scientific achievements, worldviews, and the spiritual and material culture of peoples. All these various achievements are presented in the form of knowledge that is often "lost", not used, not in demand. In order to become the property of society, knowledge must be transformed into information, alienated from its immediate carrier, reflected in a symbolic form and fixed on a material carrier.

Information, unlike knowledge, is not associated with a specific person, it is equally accessible to everyone, although the ability to turn it into knowledge is unique to everyone, based on personal experience. The information-cognitive process includes two aspects: the transformation of personal knowledge into information and subsequent reproduction, extraction of this knowledge from information, although it should be noted that in the cognitive chain: "knowledge - information, as transformed knowledge - new knowledge" is the weakest link inability to find the necessary information, use it.

So, we are dealing with a new social phenomenon, informatization, the consequences of which are difficult to assess in full.

It should be immediately noted the complexity and ambiguity of the term "informatization". To understand the meaning of this category, it is probably worth paying attention to the similarity of this term and terms with a similar ending: industrialization, automation, and computerization.

As history shows, terms with this ending often mean complex socio-economic, scientific-technical and socio-political processes of activation of certain spheres of human activity, which are caused by the needs of society at a specific stage of its development and make special demands on professionals in this field.

The analysis of the literature allows us to conclude that most concepts have not reached unity regarding their interpretation. In a number of publications known to us, informatization is essentially reduced to computerization and automation. Although some authors do not agree with this point of view, they do not go further than noting that informatization is a broader concept.

According to A. Rakitov the processes of computerization is related to the technical component of the sphere of productive forces, while the processes of informatization are "superimposed" on top of them (Rakytov, 2013).

According to N. Morse, informatization means the process of creating a social and informational structure based on the widespread use of computer technology (Morze, 2018). This definition, in our opinion, adequately reflects the general direction of this phenomenon, but with the clear priority of the technical base of informatization as a means of telecommunications.

The concept of informatization is a dynamic and pervasive process of the socio-economic life of any society. Despite the multifaceted nature of the informatization process, researchers often consider it as a result and element of scientific and technological progress, without fully elucidating the economic origins and economic significance of this outstanding modern phenomenon.

The reference dictionary "Man and society. (Culturology)" reveals the concept as follows. The difference between this concept and the above-mentioned ones is that this definition is more complete, adequately reflects the essence of the processes that actually occur, and is the most appropriate for practical use.

If information resources are taken as individual documents and arrays of documents in information systems, and an information system is considered to be an organizationally ordered collection of documents and information technologies based on the use of computing and communication tools, then the following definition appears clearer and more correct.

Thus, the informatization of society is a socio-economic, as well as a scientific and technical process of creating conditions for more complete satisfaction of society's information needs based on the effective use of information systems. From this definition, in our opinion, it is possible to highlight the purpose, essence and content of informatization of society.

The purpose of informatization is to more fully satisfy society's need for information. The essence of informatization of society is to create conditions for improving the information provision of society and satisfying information needs.

The content of the informatization of society is the improvement of specific technological, financial, organizational and other conditions to increase the efficiency of the use of modern information technologies and information resources in order to improve the awareness of society.

While revealing the essence of the processes of computerization and informatization, it is also necessary to pay attention to the difficulties that arise. A. Rakitov (Rakytov, 2013) sees the way to eliminate the causes that hold back and complicate the processes of computerization and informatization of society in raising the level of "computer culture" in society. N. Gendina calls information culture a "special culture" (Hendina, 2016), giving it a particularly high importance in the development of modern society.

Awareness of the importance of the phenomenon of information culture, the expansion of the fields of its application led to the inclusion of this information in reference publications on other fields of knowledge. Thus, in the encyclopedia "Culturology. 20th century" two meanings of the term "information culture" are given:

> A set of norms, rules and stereotypes of behavior related to information exchange in society (today it has practically fallen out of use in science); 2. A concept that characterizes culture from the point of view of information that is accumulated, processed and transmitted within its borders (Levit, 1998: 40).

It is also generally accepted to consider the issue of the formation of information culture in the public sphere as well.

The information culture of the society is closely related to the corresponding aspect of the culture of the people living in this society and who make up it: without one, there is simply no other. But any society, of course, is not equivalent to the sum of individuals included in it. The culture of society cannot be presented as the result of a mechanical composition of people's qualities. Analogous to this, the information culture of an individual cannot be considered as an arithmetic mean or average statistical value on the scale of the entire society.

A qualitatively different approach is needed, which deeply takes into account the personal characteristics of each person, on which lies the imprint of the culture of a certain era and the socio-ethnic environment as a kind of result. The progress of material production and various manifestations of the spiritual life of people are involved in the formation of the information culture of society. Without a deep mastery of the constantly growing volumes and flows of various information, serious social changes are impossible. This determines the importance of information culture, which has long been a special and very important characteristic of the development of society.

An analysis of a number of other existing definitions of the concept of "information culture" allows us to assert that this concept has an unstable scope, is interpreted in different ways, in connection with the comparison with other concepts: general human culture, educational activity, information activity, summing up the rules of human behavior in the information society. The reasons for the ambiguity of the term "information culture" are also the ambiguity of the terms "information" and "culture".

One of the most important social functions of information culture is the creation of a developed self-regulation mechanism of the emerging information society.

In turn, for the successful implementation of the specified social function of information culture, it is necessary to form in society and in the personal structure of a person the corresponding needs and methods of their reproduction, support and stimulation.

In connection with the formulation of the problem of the formation of the personality of the information society, it is shown that without participation in informational interaction with other people, the personality cannot exist and take place. Here the question arises about the emergence and development of such a social need as the need for information or info needs. V. Kogan determined the importance of the information need, labeling it as a "meta-need", because the realization of all other needs presupposes, first of all, the satisfaction of the need for information.

The right V. Kogan asserts the following: “Implementation of all other needs: in work, education, leisure, cultural and scientific benefits, etc. - as a necessary condition presupposes the prior satisfaction of the need for information” (Kogan, 1981, 31).

Currently, there are a significant number of definitions of information needs. According to N. Markova, it is appropriate to consider the information need in a broader sense:

> As a need for a complex of information that complements the original meaning, with the help of which the subject of information influence solves the objective problem that arose before him in the process of interaction with the environment reality and the resolution of which is connected with the maintenance of his activity in the period of time available for review at the optimal level, within the framework of society, professional activity” (Markova, 2003, 24).

The formation of information needs can be carried out in different ways: through upbringing and education, through a specially oriented sphere of leisure, through professional activity, etc.; individually, collectively, remotely, etc.

In our opinion, forming the informational need as a social need of the individual is most effectively possible through the education system, the strategic task of which today is the formation of a person’s ability and motivation for self-education and self-determination.

It should be noted that scientific research activity allows to fully reveal individuality, creative abilities, readiness for self-realization of the individual.

We have developed and tested an effective variant of the scientific research organization - a “virtual laboratory” (Fig. 1).

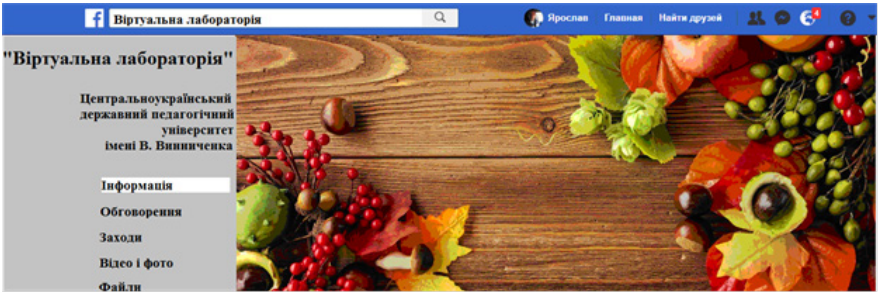

Fig. 1. Virtual laboratory. (Source: Haleta, 2018).

In our case, it is an electronic educational resource made in the form of interactive computer material (assignments, tasks, tests, experiments, etc.). The «virtual laboratory» set provides computer support for research activities. It includes two types of hardware and software complexes:

- laboratory installation with remote access, which includes a real laboratory, software and hardware for managing the installation and digitizing the received data, as well as a means of communication;
- software that allows you to simulate various psychological and pedagogical processes and situations.

The capabilities of the «virtual laboratory» make it possible to organize research in various scientific fields, as well as to ensure the interaction of scientific research activities and educational institutions of the city.

The material bank of the «virtual laboratory» is formed according to three levels of complexity with the possibility of both the reproductive educational activity of individuals and the activation of their creative potential.

The complex can be used in different modes: demonstration of tasks using a single computer or projector; individual and group work in the computer class; individual work.

Research abilities, skills and methods of activity that are formed and developed within the framework of «virtual laboratories» include:

- Observation of objects; detection of changes occurring with the object; verbal description of the object of observation; written presentation of information about the observed object - creation of an algorithmic model.
- Identification of individual features in the process of computer modeling and comparison of objects and the results of their transformation.
- The use of a computer model can be accompanied by experimental measurements in various ways.
- Formation of the ability to solve creative tasks at the level of combinations and improvisations: independently draw up an action plan (decision algorithm).
- Acquiring the skills of transmitting, searching, transforming, and storing information; mastering different ways of presenting information.
- Gaining experience of cooperation in the implementation of group projects.

In the conditions of informatization of education, the general complex of important qualities necessary for the success of activities is supplemented by specific qualities that characterize the level of information culture of an individual. This logic allows us to analyze the content of the ability to informational self-development through the following indicators:

the need for constant updating of knowledge;

mobility and adaptability in the information society;

responsibility when working with technical means;

relation to information, objects and phenomena in the information environment;

critical attitude to information consumption;

self-assessment and reflection at the level of informational contacts.

The results of experts' assessment of the level of development "ability to informational self-development" in the expert and control groups are presented in Table 1

Table 1. Level of development "ability for informational self-development"

№	Indicators	EG	CG
1	The need for constant updating of knowledge	58	24
2	Mobility and adaptability in the information society	57	25
3	Responsibility when working with technical means	68	50
4	Relation to information, objects and phenomena in the information environment	36	22
5	Critical attitude to information consumption	39	47
6	Self-assessment and reflection at the level of informational contacts	43	22
	Total	301	190

Source: (Haleta, 2018).

To check the consistency of experts' opinions, we calculated the dispersion coefficient of concordance (Hrabovetskyi, 2010) for EG and CG.

$$W = \frac{\mathfrak{P}\ S}{m^2\left(n^3 - n\right) - m\sum_{j=1}^{m} T_j} = 0{,}604771 \qquad (1)$$

To do this, we rank the expert evaluations; calculate the sum of the ranks, the deviation of the sum of the ranks from their overall average value $r_i - r$, as well as the square of the deviation $\left(r_i - \bar{r}\right)^2$. The obtained data were close to 1. Therefore, the peer review is meaningful and thorough.

5. Research results

The appeal to education as a socio-cultural phenomenon is conditioned by the belief that it is in the education system, the result of which is the functioning of a socially "prepared" personality, that the informational needs of the individual can be most fully formed.

Based on the above, when solving the problem of information needs, it is necessary to keep in mind three components:

- a person (consumer of information), who is forming his own tasks;
- the world fund of scientific information (information array), which contains the necessary information;
- an information system, a corresponding device - an intermediary between the consumer and the information array.

With regard to the educational process, modern informational means of education are of great importance:

1. Computer training programs, which include electronic textbooks, simulators, laboratory practices.
2. Educational systems based on multimedia technologies, built using personal computers, video equipment, drives.
3. Intelligent and educational expert systems used in various subject areas.
4. Distributed databases by fields of knowledge.

Therefore, an important place in education should be occupied by modern means of telecommunications, which include e-mail, teleconferences, local and regional communication networks, as well as electronic libraries, distributed and centralized publishing systems.

However, the use of new information technologies and tools in education should not exclude the training of specialists in a real subject area. It is unacceptable to replace real physical phenomena only with a model representation of them on a computer screen. Investigating the peculiarities of information activity, we found out the fact that the information environment becomes effective if it has the property of comfort for the information consumer, and for this it is necessary to create favorable

conditions for the interaction of the information system and the specialist. Thus, the human factor is included in the activity system as the main component of ensuring any process.

Conclusions

In connection with the high dynamics of information processes in society, it is no longer acceptable to rely on random factors of socialization in the conditions of informatization, it is necessary to purposefully prepare a person for life in the information society. To develop in these conditions, a person must acquire certain knowledge, skills and abilities to successfully operate with information, have qualities that allow improving these knowledge, abilities and skills in accordance with modern information technologies, and have a worldview of an information society.

Modern society cannot develop without information, the level of development of which is often related to the level of development of culture, in which a person plays the role of creator, distributor and custodian of information, realizing the model “person - information - person”. Thus, a special feature of this society is the formation of a new image of society and the transformation of the individual. In the information society, the process of forming a new personality with its own internal characteristics takes place, and this process can be characterized as the main socio-ontological search in modern conditions.

The article focuses on the impact of information on social life. The content of this phenomenon is characterized.

The process of development of the essence of the “informatization” category is revealed. The object and subject of this process are defined.

It was found that the information culture of a person is a necessary condition for the development of his personality in the conditions of informatization of society.

Based on the analysis of the essence of the concept of “information culture”, it was determined that the success of the implementation of the self-regulation mechanism of society depends on the formation of information needs in society and the personal structure.

The results of the diagnosis of the level of development of the social capacity for informational self-development gives reason to claim that the well-founded and implemented positions are effective.

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