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THE CONCEPT OF INFORMATION-COMMUNICATIVE COMPETENCE IN THE CONTEXT OF PROBLEMS OF THE HUMANITARISATION PROCESS OF TRAINING A MODERN SPECIALIST IN A TECHNICAL HIGHER EDUCATIONAL ESTABLISHMENT

SUMMARY. The interpretation of the essence and structure of info-communicative competence in the context of humanitarisation is suggested in the article; also its relevance in the process of modern engineering education is justified, ways and means of its development are given.

KEY WORDS. Information, communication, humanitarisation, info-communicative competence, engineering education.

In the conditions of the information society, the development of students' abilities for perception, selection, understanding information with the help of languages and communicative codes of culture, its transformation and subsequent use [1] on the one hand, knowledge development on the other hand, becomes the purpose of education. In this regard, it is important to have the thin line between information and knowledge into which it is transformed having passed through consciousness and the experience of the person, based on which it is possible to reconstruct and to arrange education orientation within the current situation and social order. Thus, the idea of humanitarization of education as the process of the penetration of culture into all spheres of the life and activity of future specialists, promoting humanism in the individual, instilling conscious attachment to humanistic values in young people, allows us to believe that the graduate of an engineering college has to be, first of all, a person of culture capable of creating new products based on the experience of previous generations. Asking a question, whether the mastered knowledge gets personal and significant character comprehended for the person, it is possible to specify a problem of organizing the process of training in a technical college as follows: what new approaches are necessary today for organizing the training in an engineering college where the knowledge will be transformed into the qualities of a future specialist, his value-sense guidelines, the ways of creative activity.

In the conditions of the transition to the New Educational Standards and the explanation of their educational results including the personal development of students,

we consider important to pay a special attention to the problem of humanitarization of education. At present within the culturological approach the general guidlines of humanitarization in education (E.V. Bondarevskaya, I.A. Kolesnikov, L.M. Luzin) are considered; the problem of humanitarization of the content of education is studied from the point of view of a personal—focused approach (N.A. Alekseev, V.I. Danilchuk, V.V. Serikov, V.M. Simonov); the ways of humanitarization of the educational process through the project of the educational environment (N.M. Borytko, V.I. Danilchuk) are investigated through the search of innovative technologies of the education promoting the development of mental abilities, social activity and students consciousness (V.I. Andreev, V.P. Bespalko, A.A. Verbitsky, E.F. Zeer, I.A. Zimnyaya, M.V. Klarin, etc.) its subjectivity (O.A. Maykaylova), their outlook, the logical culture of thinking. (V.S. Kornilov).

As for problems of humanitarization of the higher engineering education, in scientific literature there is an experience of the research of professional and humanitarian culture of an engineer and a specialist (V.G. Gorokhov, H. Lenk, L. Memford, N.N. Moiseyev, A. Pechchei, V.M. Rozin, V.S. Stepin, M. Heidegger, Z. Ellyul, P.K. Engelmeyer, M.V. Vishnevskaya, N.G. Bagdasaryan), humanitarization of teaching of some educational spheres (M.B. Volovich, G.V. Dorofeyev, T.A. Ivanov, L.V. Tarasov, V.N. Moshchansky, E.V. Savelova, K.V. Lavrinovich, L.F. Pichurin) is presented. At the same time this problem needs further research.

Education humanitarization—is the process of the penetration of culture into all spheres of life and activity of the specialists, promoting mainstreaming human in a person, , educating conscious attachment to humanistic values in young people, based on the development of creative potential of the personality, involving all subjects of process as equal participants of a "dialogue" and as a result of which the current trends of the development of the society, such as informatization and computerization, don't become the opposition, and serve as the means for the benefit of the development of a high qualified specialist in this or that sphere, capable of self-development, cooperation and peaceful transformation of the world, thus fulfilling a problem of the state in the sphere of education.

We see that the humanitarization affects not only the process of education, but also culture, society, a psychological component, it takes into account a philosophical point of view therefore the following aspects of humanitarization of education concerning its definition were underlined.

The philosophical aspect is defined by the unity of life, a picture of the world, outlook, morality, conscience and human actions forming his intelligent existence in the world.

The sociological aspect of humanitarization of education helps to find the ways of harmonization of the parental order, a state policy in the sphere of education, needs of the society and the personality, the interests of which modernization of education is urged to satisfy. The other question touched upon within a sociological aspect, consists of attempts of a combination of humanitarization and professionalization within an educational process.

In **the psychological aspect** in the search of effective means of humanitarization of the higher engineering education it is necessary to take into consideration a personal—developing nature of the pedagogical process taking into account the students specific features.

The pedagogical aspect assumes that education not only forms purely technical skills, but also has to bring up the personality in a person, being able to understand a current state of affairs in ecological, political, legal and sociological plans and at the same time capable of achieving new results, creating new knowledge, owing to the independent way of thinking and the flexibility of mind in the conditions of modern globalization.

The culturological aspect implies that now at the transition of the society from an industrial to a post-industrial civilization the role of the personality, undoubtedly, increases. The person, having a higher level of culture, solves the same technical problems easier.

As for substantial content of humanitarization of the engineering education, it differs from the classical humanitarization because it is very difficult to achieve the same results using the similar means of teaching in an engineering college. There is an illusion that the main thing for an engineer is not the study humanitarian basic principles, but the knowledge of mechanisms, devices and technical characteristics as an engineer often works only with the equipment. At the same time, in the work of a doctor, a psychologist, a teacher there is a direct link with a person, his behaviour, and communication. According to it specialists are usually divided into humanitarian and technical, and in our opinion, it is not quite correct. You shouldn't forget that out of a profession a specialist of an engineering sphere has to be the person, cultural, capable of self-knowledge and intelligent, being the personality.

In addition, any technical process and its consequences are directly connected with a person, his life and activity. Water pollution, industrial noise, workers exhaustion performing terse operations, the increase of a number of accidents, the damage of power lines, an atmosphere gas contamination, technogenic explosions are a consequence of misunderstanding of the importance of a human role, a weak development of the sociocultural sphere, the shift of personal and significant values, the neglects of safety rules in the pursuit of profit. Humanitarian aspects should be taken into consideration when projecting the production of objects and technologies, when recycling, sewage treatment, when performing any technical operations. Therefore, the task of an engineering college consists primarily of organizing training of technical specialists on the strong humanitarian ground.

We found out that traditional approach to humanitarization of engineering education is connected in the scientific literature, first of all, with the extension of the range of the humanitarian subjects, or with getting the second—a humanitarian specialty by a specialist, or with opportunities of intersubject integration of disciplines of all-humanitarian and professional spheres. The search of new ways of humanitarization of the engineering education can be organized with competence-based approach. Let's note that within a competence-based approach in education,

the level of competence is treated as the given social requirement (norm) to the training of students, which is necessary for the effective productive activity; the level of competency (professional integrity) is considered as a set of personal qualities (value-sense orientations, knowledge, abilities, skills), which is necessary for productive creative activity of the personality. Thus, the leading role belongs to the competences, providing the development of a modern competent specialist as a complete value-sense-oriented personality, capable of applying creatively mastered knowledge, skills in the professional activity, and if necessary—to get them, in our opinion, it becomes the main task of a technical college in the information society [2], [3].

Readiness of the identity of the specialist of the "information society" to the study, productive use and creative development of knowledge is revealed, in our opinion, in two interconnected competencies—information and communicative competence. Therefore, it is better to use, in our view, the concept of information and communicative competence *(further ICc)* as uniting them together. We agree with the understanding of the essence of information and communicative competence/ competency of students as a complete psycho-pedagogical phenomenon (N.V. Hodyakova, A.V. Vishnyakova, E.M. Shevchenko) as, on the one hand, the exchange of information is impossible without the proper communicative interaction, and, on the other hand, considering only a communicative aspect, it is impossible to forget about the information exchange, constantly accompanying it between the participants of the process of communication.

In the scientific literature ICc is considered as a component of sociocultural competence—the person's ability to navigate in the space of various cultures (O.A. Zakharova) as a condition of the personality socialization (V. Kunichkina and E.S. Koroleva). ICc is a set of professional knowledge, skills, valuable orientations (R.R. Aitbayeva). ICc is understood also as the ability to make contacts and the ability to work with information (A.V. Vishnyakova), the ability to work in the group (V.E. Yemelyanova). On the other hand, the ICc includes also skills of psychologically favourable interpersonal professional communication (M. Khokhlova and E. Cherkashin). Being an over subject competence, the ICc according to its importance, is often correlated with the school academic literacy, assuming the independent reading, memorizing, synthesizing and analyzing information content (Z.S. Edigenova). However, as we see, the ICc is much wider than literacy, and includes the set of other important skills except mastering to write and to read. From the point of view of the situation—environment approach in the pedagogical project (E.M. Shevchenko) the ICc characterizes "the conscious motivation of an information activity; an effective, creative and responsible application of computer networks in non-standard professional situations; the readiness for a constructive cooperation and interpersonal dialogue with the removed partner" [4].

We have also analyzed the similar concepts which enable to characterize the phenomenon of the ICc better and to add the information to the given definitions. We have referred communicative competence, information competence and information-

communication competence to such concepts (the ICT-competence, computer competence).

We don't doubt about the first two competences because they, as it has already been mentioned above, make up our concept—the information-communicative competence. The mention of the information-communication competence, at first sight, generates confusion. But actually, the difference between them is connected with the fact that "communication—is a property of consciousness to establish a communication channel for an interactive flow of information" [5], it is "the order, the mechanism of information transfer in the space" [6], and communicativeness is a property of an individual to take part in the intelligent speech contact with another individual, including indirect modern information-communication means. As for an engineering specialist it is a refraction of technology into a human activity, overcoming technocracy. Thus, information-communicative competence is a wider concept including both communicative, information, and information-communicativeness competence.

Using their content, we can complete the given definitions of ICc which unite the communication in itself, the work with information, the play of a social role, the tolerant attitude to the partner of a dialogue, the ability to create an optimal communicative space for sense- actualization, the integration of IT knowledge and personal qualities in a more general capacity to act in the space of the Internet information resources, the ability to organize internal and external information resources, mastering new sign systems and etc.

It is significant that in the Federal State Education Standards (documents) of Higher Professional Education of the last version the ICc is indirectly indicated as an essential component of professional training of a modern specialist (the term ICc in Standards isn't used). In the conditions of the specialists training of an engineering college, ICc, being, first of all, a general cultural competence, is also one of the parts of professional competences, characterizing the readiness of a future specialist for the development and use of knowledge in the professional work and communication. So, for example, in the HPE Standard of the last version for "the Oil and Gas Business" a number of general cultural competencies is presented which are substantially correlated with our interpretation of the ICc as a target reference points of education.

In general, it should be noted that, in spite of the fact, that the ICc phenomenon is already investigated to a certain degree in the scientific literature, but this phenomenon hasn't be given the proper status yet as a subject of a scientific research. We haven't managed to find a definition which would reflect the specifics of this phenomenon in the context of modern educational process in the information society, including interrelation of its communicative and information components. Therefore, we consider it is necessary to specify the content of this concept on the basis of modern scientific literature.

In our opinion, it is substantial—the ICc concept is correlated to a problem of the personality development, capable of making a constructive interpersonal dialogue in the conditions of professional communication meaningfully, including cross-cultural,

which can be realized by using modern information and communication technologies; the personality, being able to be guided in various flows of information, enriching it with the valuable and personal content and embodying the own creative approach [7; 113], aspiring to a meaningful life in the world.

We offer the following definition of the ICc. The information and communicative competence—is the integrative characteristic of personal qualities of an individual, capable of making correctly business communication according to the used language and creatively reproducing and modelling new objects and processes of the global information space owing to the actualization of the acquired sociocultural experience through the prism of the professional activity on the basis of opportunities of the modern technical means in the conditions of value-sense life in the single world community.

Relying on this definition, we point out eight components in structure of the ICc (table 1).

Table 1

The structure of information-communicative competence

Components	Essence
Informational	The ability of making different operations with information, modelling and projecting objects and processes
Communicative	Organizing a communication in the form of a dialogue, the ability to work in a team
Personal	The ability to make decisions independently; the development of research and creative abilities; the feeling of responsibility; self-discipline; abilities for the methodological work and self-organization
Axiological (spiritual and moral)	The ability to regulate the behaviour within significant universal values (social partnership, tolerance); operating by various concepts and meanings
Technological	The ability of using the mastered engineering skills for the use of modern means of information and communicative technologies in different spheres of life and activity
Linguistic	The ability to make sentences grammatically correct, to make a sense speech, to use expressions according to a certain sociocultural situation
Professional	The ability to use professional knowledge in work
Cross-cultural	The ability to realize all mentioned components of ICc in different sociocultural systems and spaces

According to our proposed interpretation of substantial and structural characteristics of the ICc, we believe, that the ICc formation in the educational process of an engineering college can be organized through some interconnected stages, offered by A.A. Verbitsky within the symbolic and contextual approach (semiotics, imitating and social) [8].

At the first stage, which we call *directly-motivational*, the students' motivation for self-development, self-knowledge is actualized, the desire to reveal the meanings

put in the information flow and the ability to make new knowledge objects and processes are stimulated. This stage is realized owing to the use of open type questions in the educational process, illustrative and explanatory tasks, video and audio texts, game technologies. At this stage a student gets the level of the formation of the ICc—below intermediate.

The *orientation and activity* stage forms the intermediate level of the ICc and is characterized by the use of methods of work for understanding and comprehension of symbolic information, exactly—the hermeneutical methods [9] being main in given and subsequent stages.

At the third stage there is a communication of the symbolic and social environment. The *communicative and activity* stage is beyond the text structure. Modelling the communicative situation, developing the abilities to define a speech task, the ability to plan the course of the conversation becomes the basis. This is possible due to: the creations of problem situations in the classroom and active pupils' self-work to solve them; the use of the cooperation technology; project and game technologies in the education process (role and business games), trainings, and discussions. The ICc formation level is above intermediate.

The *professional and practical* stage is the key stage of the ICc formation (high level). At this stage students work is organized this way that it is closely connected with the conditions of their future real professional activity. Responsibility, independence, making a careful planning, creativity, concentration, tolerance and many other qualities necessary for a modern specialist are developed through the narrative procedures use (creation and presentation of author's narrations (essay and composition writing); the creation on the basis of ICT technologies [10-11] and making various presentations, computer newspapers; participation in various festivals and conferences.

It is known that the integration of educational and extracurricular activities is one of the areas of the competence-based approach realization [12], therefore students extracurricular work is the basic point of this stage realization.

Thus, the information-communicative competence (ICc) is a complex concept, in a certain degree, integrating the contents of the information and communicative competence. By its nature, the ICc is a general cultural competence, but it has a special importance for the training process in a technical college, being as the possible direction of humanitarian educational process. The developed ICc of engineering college students shows their readiness to solve creatively complicated engineering problems, when in the intelligent professional activity, people rely on the socio-cultural experience, show the ability to interact with the representatives of other cultures, are able to interpret the meanings put in the information flow.

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