FORMING OF INFORMATIONAL CULTURE AS A NECESSARY CONDITION OF THE LEVEL RAISING OF HIGHER EDUCATION

Alina A. Khrulyova[1] and Regina G. Sakhieva[2]

The relevance of declared problem in the article is caused by the fact that in the 21st century – a century of nano- and computer technologies – knowledge is required not only in the sphere actually qualifications from the specialist of any sphere of action, but also ability to carry effectively out search, selection, processing and an assessment of the obtained information, to create new, and also ability to computer literacy and information communication. This article is aimed at the disclosure of the process of forming of informational culture as a prerequisite for the level raising of higher education. During the research work the following methods were used: a theoretical analysis of pedagogical, psychological and methodological literature and materials for the informatization of educational system, electronic resources on the problem; systematization and generalization of pedagogical experience. The article highlights the components of the informational culture of the future teacher: computer literacy, informational competence, informational and cultural creativity and informational reflection, as well as the criteria for its formation: motivational, cognitive, activity and reflective. The key approaches are identified (information-communicative, axiological, system-activity, environmental, cultural) and principles (personal-professional orientation, the integration of the subject of activity, variability, openness, continuity, reflexivity, dialogization and personalization of the teacher and students, cooperation of teacher and students, globalization), which ensure the effectiveness of formation of informational culture of students of educational institutions of higher education. The contents of this article can be useful for teachers, adapting to the new conditions of professional work in the field of higher education, professionals in the field of information and communication technologies.

Keywords: higher education, competence approach, informational culture, information literacy, ICT.

INTRODUCTION

Nowadays no one doubts the claim that humanity is evolving in conditions of globalization, on the one hand, and informatization of all spheres of human activity, on the other. It becomes more and more difficult for the person to navigate in the large volumes of information, to receive and remake the incoming data continuously. The power of modern information technology and technology creates the danger of manipulation of consciousness and human behavior threatens dehumanization. Therefore, throughout the world all the more is realized the

[1] Humanities and Pedagogics Academy (Branch) of V. I. Vernadsky Crimean Federal University, Simferopol, Russia, *E-mail: lacoste_2009@ukr.net*

[2] Institute of Psychology and Education, Kazan (Volga region) Federal University, Kazan, Russia. *E-mail: saxievarg@mail.ru*

need to address the global problem - to prepare people for the new conditions of life and professional work in highly automated IT environment, teach them to use it effectively and opportunities to protect themselves from negative influences (Gendina, 2009).

In modern conditions of educational concepts have a strong information base. Analysis of the main ideas and directions of modernization of the educational system leads to the following conclusion: at all levels of the educational system increased paid attention to the problems of creation and use of information, informational resources that act as a strategic resource for the development of education and educational environment components (Pronina, 2011; Olkhovaya *et al.,* 2016).

In the professional education system, we are faced with a situation where the teacher himself is a specialist of certain sectors of activity, and at the same time his professional activities related to the training of specialists. In our view, the main aim, which is facing higher education in the conditions of modernization – is the formation and development of informational culture of the future specialists. This problem is actualized in connection with the transition to training through undergraduate and graduate programs, where the independent activity of students has become a priority.

Currently, a new high-quality information learning environment that stimulates the process of information development. Information environment encourages participants in the educational process, to participate in a fundamentally new form of communication, which is focused on the activity, the operational nature of the behavior. These trends have led to increased requirements for the competence of the individual information. Human being is increasingly required knowledge, skills and abilities formed effective interaction with a rapidly changing information environment, the ability to use the opportunities arising from it. Educational institutions of higher education are trying to create a learning environment where the subjects of the educational process have the opportunity to obtain the necessary information. It is available, differs completeness, timeliness, adequacy of tasks. Universal intelligent information environment is formed, informational policy is created in educational institutions of higher education.

Informational technologies are actively developed in recent years, which have a significant impact on all spheres of life. The future professional should be aware of the possibilities of use in the professional work of the new information technologies, know the features of information current in their field of activity (Pronina 2012; Vlasova, Kirilova & Curteva, 2016; Khairullina et al., 2016).

Informational culture involves understanding of the role of social, scientific and other types of information and informational systems in the professional activity and in terms of universal, humanistic values; understanding of the main ways and directions of use of informatics and information technologies in the society

development. On this basis, V. G. Kinelev (2010) determines the general informational culture in the following way. Personal Informational culture is an integral part of the basic training of the person as the system characteristics of a person that allows him to participate effectively in all kinds of work with information: receiving, accumulation, coding and remaking of any kind, building on this basis qualitatively new information, its transfer, practical use and including literacy and competence in understanding the nature of information processes and relationships, humanistic-oriented information of value-semantic sphere (aspirations, interests, ideology, values), developed an informational reflection and creativity in the information behavior and social and informational activities.

METHODOLOGICAL FRAMEWORK

Research methods

During the research work the following methods were used: a theoretical analysis of pedagogical, psychological and methodological literature and materials for the informatization of education, electronic resources on the problem; systematization and generalization of pedagogical experience.

Theoretical and methodological basis of research

Analysis of research scientists has allowed to allocate provisions relevant for the development of methodological and theoretical aspects of forming of informational culture of the future specialists: the question of determining the nature of the concept of culture and its place in education (Andrushchenko, 1988; Veryaev, 1999; Gubersky, 2002; Krylova 1990; Rozin, 1997); the formation of the components of informational culture (Vinogradov, 1991; Vinarik, 2009; Vorobyov, 2009; Ginkul, 2009; Gorvits, 1998; Dzhincharadze, 1997; Ershov, 1988; Zhaldak, 1989; Skvortsov 2001; Sukhina, 1999; Tarasova, 2009; Schedrin, 2009); the impact of information and communicative technologies on the content and teaching methods (Apatova, 1994; Klochko, 2012); methodological problems of the development of the informational culture (Borodina, 1998; Vokhrysheva, 1997; Gendina, 1999; Gershunsky, 1990; Guk, 1999; Zinovyeva, 1996; Zubov, 1994; Minkina, 1998; Morgenstern, 2000; Polyakova, 2005; Semenyuk, 1994; Starovoytova 2001; Starodubova, 2001; Sukhanov, 1988; Semyonovкер, 1994; Fokeev, 1997; Hangeldiyeva, 1993; Shapiro, 1975); the forming of informational skills as a prerequisite for successful teaching and learning activities of students, readiness for self-education (Gromtseva, 1983; Zharova, 1986; Pidkasisty, 1980; Raisky, 1983; Skatkin, 1983; Schukina, 1979). The learning of psychological and educational literature allows to ascertain the absence of specific studies on the problem of formation of informational culture as a prerequisite for raising the level of higher education.

RESULTS

The components of the informational culture

The components of the informational culture are computer literacy, informational competence, informational and cultural creativity and informational reflection.

The information literacy is understood as a person's ability to identify the need for information, the ability to look for it effectively, evaluate and use it. Information literacy is a necessary skills body set that is required from each individual to realize the need for information, to be able to find it, to give an accurate assessment and use the information effectively.

Foundation information literacy is the basis of informational culture, which begins its development according to the age of individual, national and other features. Solving the problem of standardizing of the expected result of educational activities and the development of a diagnostic apparatus in terms of cultural identity, we have identified this characteristic, that is built on the basis of knowledge and skills.

Information literacy means the master of knowledge (facts, ideas, concepts, laws, etc.), skills, symbols, rules and regulations in the field of computerization and informatization. As to A. P. Ershov (1988), the computerization means the introduction of computers in a certain area of human activity, accompanied by a significant restructuring of this activity under the influence of the computer, and computerization – building the informational society.

Thus, the informational (computer) literacy can be displayed itself in the outlook, erudition, knowledge about various phenomena of computerization and informatization from the point of scientific knowledge and from the point of view of practical experience, extracted directly from human being's communication with other people, media information, etc.

According to the Moscow Declaration on Media and Informational Literacy, the final document of the International Conference "Media and Informational Literacy in societies of knowledge", in the framework of Russia's presidency of the Intergovernmental Council of UNESCO program "Information for all", it was recognized that the media and informational literacy are fundamental for the well-being and development of the individual, community, economy and civil society. It was soluted to include the development of media and informational literacy as one of the priority directions of the national policy in education, culture, information, media and research, to develop the appropriate tools in the field of media and information literacy, including the creation of the conceptual foundations, research-based methods, indicators and assessment methods (Moscow Declaration on media and informational literacy, 2012).

The second component of informational culture is *informational competence*. Competence approach as profiling paradigm of modern educational area, creates

favorable conditions for the didactic conditions of integration of electronic teaching materials in the teaching process. The introduction of ICT in the educational process enhances the teacher's opportunities for involving the students in cognitive activity in a variety of forms. Modern electronic didactic materials aimed to students' active participation in the educational process and their interaction with the teacher.

Under the informational competence researchers understand:

– professionally significant quality, consisting in acquirement of basic skills of work with information (Dzugkoeva, 2003);

– a complex of individually-psychological education on the based of the integration of theoretical knowledge and practical skills in the field of innovative technologies and a certain personality traits set of features (Zaytseva, 2002);

– a new literacy, which includes an active independent information processing skills of person, acceptance of new solutions in unexpected situations with the use of technological tools (Semenov, 2000).

M. B. Lebedeva и O. N. Shilova (2004) use the concept of ICT competence, seeing it as the main competence of modern human being, that is showed in the activities at the various tasks with the assistance of computer, telecommunications, the Internet, etc.

The third component of informational culture is *an informational reflection*. The project of new forms of learning, of course, is connected with the tasks of purposeful forming of reflection. The problem of determining the conditions of forming of reflection in the learning activities in this regard appears increasingly the subject of learning and the development of the means of its forming brings practical ability to manage the development of the subject and improving its activity. With regard to training activities contemporary researchers define reflection as the ability to be aware of its own activities and, above all, the result and the way that has led to this result, as the ability to analyze their own means of knowledge (Romanova, 2014).

Informational environment motivates the user to estimate constantly their knowledge and skills set fixed in the infosphere, to be able to correlate the patterns of knowledge and information. The success of every human life increasingly depends on how it is able to receive in time, perceive adequately and use productively the new information (or rather new knowledge) in their daily lives, as well as to recognize their place in the infosphere, diagnose himself as a creator and a consumer of information, realize the information emerging situation.

The fourth component of informational culture is *an informational and cultural creativity.* According to L. S. Vygotsky (1984), the cultural creativity means that human being is not only the creation of a culture, but also its creator.

It should be noted that the concept of "cultural creativity" in education applies mainly not only with the relationship with "informational products", as in the accepting values creativity by students in all its forms and aspects, the desire to be created, as well as the development of creative abilities and manifestations. The object of informational creativity can be images and ideas, symbols and concepts, actions, and attitudes, values and beliefs.

In addition, the creative component can be interpreted as the individual willingness to perform culture making, culture creative role in "disobjectification" of the culture and the creation of new forms of culture. Creativity can be showed in relation to the rules ("rule-making") and traditions, generating new personal meanings ("revaluation of values" meaning making), knowledge (discovery, theory, etc.), new ways of action (technology), own lives and oneself (definition prospects of personal growth, self-development), etc.

It is obvious that the traditional educational model is not able to create the conditions for a modern cultural and creative process in which the personality implies not only entry into the culture, but also the production of its values. Creativity in this case should be inherently to the education, but not as the subject of an episodic activity.

This made dependent of the creation of new organizational forms of training, including with the use of new informational technologies.

Scientific approaches that ensure the effectiveness of forming of informational culture

Methodological basis of the research work were fundamental positions of information-communicative, axiological, system-activity, environmental, and cultural-creative approaches.

The essence of *information-communicative approach* is in active and constant expansion of information field, which occurs in the process of direct communication and exchange of information in the system "teacher – student" and "student – student" and assumes the use of interactive media delivery and retention of information, and dialogue. An important role in the realization of information-communicative approach plays the use of teaching and learning aids, teaching materials and training kits – electronic, in particular interactive and multimedia, as they differ in the effective supply of information, flexibility in its selection, mobility in the material structuring (the possibility of mobile rebuilding, expansion and replacement of thematic blocks).

From the standpoint of this approach in the training of future specialists it is occurred the displacement of accent from the role of the teacher as a carrier of substantially all volume of information needed for assimilation, and the carrier of truth in the last instance to the role of the teacher as the organizer of the communicative process, that do not impose students the complete truth, but helps to come to it themselves by deliberate and well-organized system of training.

Selecting of *the axiological approach* in the training of the future specialist is due to the orientation of professional training on the forming of students' systems of universal and professional values which define their relationship to the world, to their activities, to themselves as a person and a professional.

Axiological approach is based on an understanding of the social nature of values, the influence of high-quality selection of values in the forming of individual values, on the development of his spiritual, moral and creative potential for value results in all spheres of life. The axiological component includes methods stimulation of duty and responsibility clarification of personal and social significance of information activities; creating of the situations that lead to the realization of the need of information.

System-activity approach is a methodological basis of the FSES, as a system making component that is focused on educational outcomes. This approach involves the training and the development of personality traits of students in accordance with the requirements of the information society, based on a strategy of social engineering and the construction of the educational system through the development of content and technologies that define ways to achieve the desired result, personal and cognitive development of students.

Using epy of the system-activity approach is focused primarily on the creation of informational-communicative culture of students. The role of cognitive activity of students is increasingsharply, its motivation for independent academic work. The advantage of system-activity approach is the fact that it is organically combined with modern educational technologies: ICT, playing technologies (business and retrospective games, intellectual tournaments), critical thinking technology, "Debates" technology, the technology of research and design activity that contributes to the forming of universal curricular activities.

The Environmental approach is a theory and technology of mediated control of the educational process, in which the focus is on the inclusion of the intrinsic activity of the student, his self-education, self-upbringing and self-development; learning environment – it is the condition and the factor of success or failure of the student.

The learning environment is both a mean of diagnosing, designing and producing results, as well as the actualization of the inner world of the student, who is not a consumer of knowledge, but co-creator of the educational environment. The sources of information and knowledge in the educational environment are educational materials, online communities, groups, all participants in the educational process. Educational environment represents the micromodel of communication and informational culture of mankind. The learning environment is a special personal space of learning and development, where each student develops according to their individual characteristics.

The cultural approach is based on a deep awareness of the interaction categories of "information" and "culture", on the assumption that the informational culture is

an integral part of the human culture. From the standpoint of cultural approach the informational culture is founded the individual ideological preferences, it generates the value orientations with the attitude to information as a cultural element. This approach provides a personal-semantic development of students and supports the person individuality, it turns from a passive object of cultural influence in the subject of cultural creativity. Realization of cultural approach, on the one hand contributes to the preservation and development of a common base of culture in general, and on the other – creates opportunities for creative formation of informational culture of the future teachers of professional training in the process of higher education.

Accordingly, based on the cultural approach in the process of formation of informational culture of the future specialists, we determine worldviews, focusing on the attitude to information of a leading value of modern culture, orient the student to an active position of the creator of modern culture.

Each of these approaches is aimed to develop thecomponents of the professional training of future specialists (the formation of professional competencies, systematic accumulation of new knowledge and skills, the development of certain personal qualities, which are realized in the pedagogical communication, the related training in all types of ICT technologies).

The principles of training which are aimed at the successful forming of informational culture

The basis for the successful organization of the educational process are productive pedagogical principles, acting as a system of common guidelines which define the content, methods, organization and analysis ways of its results. We characterize the principles that aim at the successful forming of informational culture of the future specialists: personal-professional orientation, the integration of the subject of activity, variability, openness, continuity, reflexivity, dialogization and personalization of the teacher and students, cooperation of the teacher and students.

The principle of personal-professional orientation – involves both the formation of social and psychological orientation of future specialists for professional activity, and interdisciplinary relations in the organization and content of education in educational institution of higher education. Personality-oriented professional education is intended to focus as much as possible on the identity of the professional self-development which is necessary for successful future professional actions.

The principle of integration of the subject of activity – involves the efforts uniting of all subjects of the educational process (teaching staff, students). The formation of informational culture of students involves the study of the content of training courses and learning algorithms, information and communication activities. This principle makes possible to implement educational programs on the basics of informational culture in the curriculum of the educational organization of higher education.

The principle of variability – allows to organize the process of forming of students' informational culture through the inclusion in the higher education the system of project activities, problem-based learning, elective courses, individual educational routes, providing advice, various forms of educational work. Also, this principle implies a planned educational activities in collaboration with an English teacher.

The principle of openness – allows students to carry out the information activities, not only in the information sphere of the educational institutions in training programs, but also outside it, without restricting the choice of sources of information, the creation of individual style information activities, their own educational way, involving a variety of sources; suggests that students are given more freedom, independence and responsibility for the final result of educational activities.

The principle of continuence – ensures the integrity of the educational process for the forming of students' informational culture at all grade levels, as well as focused on the continuity of the process of information activities (from the wording of the request for information to the final result of the work), and thus makes possible to overcome the fragmentation of training by the individual general training information skills and abilities.

The principle of reflexivity – ensures the goal setting of objectives, establishment and management of adequate requirements for oneself on the basis of correlation of external requirements, situational specificity of the subject. Because of the main thing in the pedagogical process at the moment is determined by the development of the individual subjects of the process, and the development of the process of internal and judge its passage is available primarily to the subject, the assessment of such development is allowed to make by reflection, as an act of self-observation, introspection, self-thinking. In the process of professional training the reflexive skills allow its subjects to organize and fix the result of the status of development, self-development, as well as the reasons for the positive or negative dynamics of this process.

The principle of dialogization and personalization of the teacher and students – is the interaction between the educational process participants and control of each other. The personalization of pedagogical interaction requires abandoning the role of masks, adequate inclusion in this process of personal experience (feelings, experiences, emotions, their respective actions and deeds). The principle of dialogization is due to the fact that only in a subject-subject relations, equal educational cooperation and collaboration possible the harmonious development of personality. The principle of dialogization and personalization involves the superposition of the teacher and the conversion of the subordinated position of the student in the individual-equal position of cooperating people.

The principle of cooperation and the relationship of the teacher and students – suggests the correct correspondence as a pedagogical influence, and its active

perception, the student's own activity, which manifests in reciprocal effects on himself and the teacher. The ability of educational cooperation is a universal feature of the teacher, the characteristic performance of its functions in the pedagogical process, that influence on the others in a joint venture depends on the ability to achieve the desired results, the comfort of the pedagogical process. The learning process is not a mechanical sum of the impact of training on the student's activity. The character of manifestation of the teacher and student activity in learning and in extra-curricular activities can be different and there may be different options for interaction. The essence of pedagogical interaction is the direct or indirect exposure of the subjects of the process at each other, generating their mutual relationship.

The principle of globalization assumes the functionality opportunities and technical characteristics of information and communication tools, which are already far ahead of the level of preparationof society, they are required to use them effectively, and this rises another social problem – the problem of the development of a new informational culture of the society, which is closely related to the problem areas of development education. Information technology allows to personalize learning, to adopt it to the characteristics of each student's action, to build training in a dialogue mode.

The criteria of forming of informational culture

Within the limits of our research there are four criteria of forming of informational culture of the future specialists: motivational, cognitive, activity and reflective.

The motivational criterion is related to the fact that the success of any action depends on the motivation of the person. In the context of our research motivational criterion is a system of needs, motivations for future English teachers that strive to build their own informational culture, acquirement of ICT technologies for a successful career.

The cognitive criterion relates to the presence of knowledge component in the learning process. This criterion includes a system of knowledge about the essence of the informational culture concept, mechanisms, methods and means of informational work, knowledge of the content of the information environment concepts; moral and legal norms of information ethics developed by the society; opportunities for application of informational technologies in education and personal development.

The activity criterion is due to the practical test, activity character of acquirement of a foreign language using ICT. This criterion includes the student skills of work with information directly using a variety of modern technical tools, as well as the ability to use ICT in their professional activities.

The reflective criterion relates to the necessity of self-esteem, summing up the professional activity, paying attention in the products of the future specialist's own activity. As a part of this evaluation is carried out of actually achieved level

of informational culture and the desired, it is defined the areas for further work on the forming of informational culture, the obtained knowledge is correcting if it is necessary.

DISCUSSIONS

The social significance of forming of informational culture is emphasized in N. I. Gendina's (2002) researches, the result of which was the development of the concept of personal informational culture in the educational and librarian institutions. The essence of the concept is reduced to the thesis statement that "... the massive increase in the level of informational culture of society is possible only if the organization of special education of modern consumers of information, i.e., the organization of information education" (Gendina, 2002).

A fairly detailed analysis of the informational culture is represented in Y. S. Branovsky's (2002) works. The author presents the personal informational culture as the ability and the need for specialist to use the available information possibilities for systematic and deliberate search for new knowledge, its interpretation and dissemination. According to his point of view, the most important components of the personal informational culture is the ability to choose and formulate the goals, to carry out tasking, to build information processes and phenomena which are studied for the analysis of the informational models with the help of automated information systems and to interpret the results; to foresee the consequences of decisions and to make related conclusions; to use for the analysis of processes and phenomena the learning database of knowledge, artificial intelligence systems and other modern informational technologies. The skills of streamlining, organizing, structuring of data and knowledge, understanding of the informational modeling, ways of presenting data and knowledge are important (Branovsky, 2002; Cherdymova, 2002, 2010).

The analysis of the literature allowed to make conclusion that the forming of informational culture is a complex, dynamic system that includes interconnected elements, which makes possible to present more clearly purposeful process of forming of informational culture. The methodological bases of forming of informational culture constituted the fundamental positions of informational and communicative, axiological, system-activity, environmental, and cultural and creative approaches. As any pedagogical process operates and develops according to the teaching principles that are the regularity of an activity and influence on the choice of educational technologies, which provide the necessary operation of the object of study, we have identified principles that are aimed, in our opinion, on the design of the training process of future English teachers. The basis for the successful organization of the educational process are productive pedagogical principles, acting as a system of common guidelines defining the content, methods, organization and teaching methods for the analysis of its results. We have obtained the principles

that contribute to the forming of informational culture of the future specialists: personal-professional orientation, integration of the subject of activity, variability, openness, continuity, relaxant, dialogization and personalization of the teacher and students, cooperation of the teacher and students, globalization.

CONCLUSION

It was found that the forming of informational culture is a necessary condition for the level raising of higher education. The article defines the main approaches and principles which affect the successful forming of informational culture of students, distinguishes the components of informational culture and criteria of its formation. The process of forming of informational culture of the future specialists will be more effective if the application of the reviewed approaches be combined, combining them into a coherenting, multi-level, dynamic system.

In the process of the research work there were new questions and problems that need to be solved. We need to continue the research on the development of the stages and pedagogical conditions, the realization of which is aimed at the forming of informational culture of specialists.

Recommendations

The content of this article can be useful for teachers, adapting to the new conditions of professional work in the field of higher education, professionals in the field of information and communication technologies.

Acknowledgements

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