Axiological, goal and substantial aspects of lifelong learning of teacher of higher school in context of informatization of his professional activity

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Abstract. Issues, related to insufficient competence of higher school teachers in the sphere of using modern informational resources and technologies in their professional activities are discussed in this paper. The suggestion offered in the paper is optimization of higher school teachers' lifelong learning. This optimization is possible due to the axiological approach to formation of substantial and procedural aspect of learning. The support on axiological approach allows to consider the multidimensional nature of vocational and life experience, character of his base of values. The analysis of necessary content of lifelong learning of a teacher for development of his information competence as expert, subject of activity, member of professional community and carrier of professional consciousness is presented in the paper. These aspects of professionalizing of a teacher are analyzed in the context of his learning, training and research activity.

It's hard to argue the fact that a life of a modern human, and a professional is inconceivable without being included into a whole information space. Education, indeed, as an institution, traditionally supporting, reproducing and constructing the culture of society, cannot be away from these processes [1]. Hence, the intensity of the process of informatization of education in general and higher school education in particular, will only increase. However, as the analysis of mass educational practice and a number of publications show, modern teachers of the domestic higher school in the vast majority (to 75% on some researches) [2] are still insufficiently competent of business of design and realization of the professional activity on the basis of organic integration of the modern information and communication technologies (ICT) and the latest information resources. into it.

Relevance of development of professional and significant ability of a teacher of the higher school (adequately, effectively) to use rationally means of ICT and information resources in professional activity is caused by: 1) the need to prepare professionals, that will succeed in the global information society; 2) high didactic potential of ICT tools, which allow to optimize educational activities in the higher school; 3) a change in professional and scientific communication due to development of online communication, etc.

The implementation of various ICT tools in higher education showed that one-dimensional, fragmentary mastering of these resources and technologies by teachers doesn't lead to their functional, but to formal

application. In fact, it demonstrates the contradiction between intense nature of the society and education informatization and the insufficient higher school teacher's ICT competence development level. This contradiction is the main reason for increasing "informational heterogeneity of scientific and pedagogical community" [3], which identifies not only the digital divide among the scientific and pedagogical workers, but also the inequality in the professional teacher's life, due to the conscious or unconscious neglect of informational and communicational technologies for increasing efficiency in scientific and educational components of the teacher's professionalism.

The above-mentioned disharmony is conditioned by: negative perception of global networks; stereotypes, negative attitudes to technologies; unawareness of vital and professional consequences of informational illiteracy; belief in advantages of a paper-book culture over digital one, and so on. All these reasons are rooted in the value world of a professional, they have axiological nature. Consequently, it is necessary to shape (cultivate) the mentioned capability with the support of the axiological approach to the design of the objectives and content of lifelong education of a professional. Lifelong professional education itself should be comprehended and accepted by a professional as the best way to improve the efficiency of his professional activities.

The situation becomes particularly significant, if we turn to the established practice of vocational education. Until recently, postgraduate adult education has been

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built on the basis of the traditional model (the course preparation with all the traditional trappings: lectures, seminars, exams, tests), and the deficit model (educational programs focused on building knowledge and skills that students lacking). [4] Today, the need to attract all resources of lifelong professional education (formal, non-formal, informal) to "launch" a post-technocratic model oriented not on qualification upgrade, but on comprehensive professional development, professional development of a subject of education is becoming more and more obvious. [5]

Thus, the teacher's education aim in the context of educational informatization is formation (improving) of the ability to rationally apply modern ICT tools and digital informational resources to their professional lives.

Formation of the capability is always axiological conditioned [6]. Axio-defined architectonic of vital and professional experience of a teacher determines the possibility of integration into him new professional values conditioned by the changing contours and the content of the information space with the development of modern ICT. In the context of the axiological approach, informatization of professional life of a higher school teacher should be considered in two axiological dimensions: horizontal and vertical. The vertical dimension captures the axiological base of the main functional components of his professional life: teaching and educational research. [7] Horizontal axiological dimension determines the axiological base of a teacher's life as a specialist, subject to activity, the professional community member and the professional self-consciousness of medium [8].

The inclusion of these grounds in teacher's lifelong education construction determines the possibility of mastering studied ability, because it organically "grows" into the fabric of vital and professional experience of a teacher with all its diversity, and necessary completeness. This, in turn, allows for a harmonious professional development of a teacher in terms of rational and organic management of products of informatization of society and education.

Building lifelong education content for improving the above-mentioned ability requires decomposition of the designated target into the professionalization tasks due to the computerization of the professional life of a teacher. We offer to represent the system of "professional life of a higher school teacher" in the form of axio-frame, which, is essentially, a matrix consisting of a conventionally selected life sectors of the world of a professional, each one of which in one of its projection can be analyzed from the point of view of the existing and the required vital and professional experience of a teacher; in the other projection - as a specific axio-sense reality, presented by a system of beliefs, values, axiological orientations, that are axiological context of integration of the new professional and personal experience (knowledge, meanings, values).

So what problems should a teacher solve by means of educational activities? What content must he master to form (improve) the declared capability?

		Professional life of a higher school teacher			
Axiological grounds	Of educational activities	5	6	7	8
	Of scientific research	1	2	3	4
		specialist	subject	Member of a professional community	Professional self-consciousness medium
		Axiological grounds of a teacher as a			

Fig.1. Axio-frame "Professional life of a higher school teacher"

According to the present axio-frame, within informatization of research components of his professional life a teacher should solve by means of lifelong education the following problems:

- 1) increasean efficiency of employment of informational resources and ICT as a specialist researcher of a certain scientific field;
- 2) self-development as a subject of scientific research (his transition from the executor to the doer, who independently defines purposeful situational use of ICT and informational resources in his research);
- 3) optimization of his professional communication in the scientific community through the use of modern ICT;
- 4) realization of his professional and scientific purposes, values and meanings, knowledge of the performance criteria of scientific activity, its best features in a global information society.

According to these tasks it is possible to build substantial filling of various formats of continuous education of the teacher of the higher school in the context of mastering of the studied ability. Concerning the first segment of the axioframe, a teacher as a specialist researcher needs to master modern methods and means of collection, transfer and storage of scientific information; methods of network access to collections of an University Library, to the leading domestic and international libraries; methods of creating telecommunication laboratories, providing remote access to the equipment necessary to carry out scientific research; competences for creating available free demo versions of electronic information resources created as a result of scientific research of pedagogical staff of an University; knowledge and ability to create and develop university departments research grants databases, etc.

The development of the subjective nature of research activities (the second segment of axioframe) requires from teacher knowledge and ability to build internet servers of their scientific schools; to create their own virtual exhibitions of scientific achievements; acquiring competences in creation and managing personal websites; establishment of scientific research funds of programs on subjects of their departments, and so on.

In order to establish an effective scientific communication (third segment) a teacher must learn computer tools of operational communication between teachers of an University of different scientific disciplines, between teachers of different Universities, between teachers and students of an University, between teachers and students of other Universities; learn how to conduct or participate in virtual and telecommunication scientific conferences, etc.

The content of the fourth segment of axioframe requires competencies in creation (working) with quantified databanks of scientific publications of an University with remote access [9], competencies in working with international databases, foreign library collections, scientific schools on similar research subjects in a country and abroad, and so on.

As an educational component of professional activities of a higher school teacher, more efficient use of informational resources and technologies in his professional activity involves the following tasks (in accordance with through numbering of the axioframe sectors):

5) optimized application of modern informational resources and technologies to professional pedagogical activity in certain subjects teaching (courses, disciplines) in its constructive and content-based, structural and operational, and structural and material terms;

6) development of its own subjectivity and assistance in forming the subjective attitude of students in design and organization of their education activities with use of advanced information technologies and education resources;

7) increase of efficiency of professional and pedagogical communication with use of modern information resources and ICT;

8) updating of professional and pedagogical meanings, purposes and values of pedagogically reasonable use of information resources and technologies in education process of the higher school.

According to the content-based approach, lifelong education of a professional as a specialist teacher of a specific subject area (the fifth segment of axioframe) involves mastering skills of working with distributed information resources (educational website), with databanks of remote education information, with modern technological means of visualization of education information.[10]

Modern teacher also needs to master competencies in the field of remote learning: case-technologies (a student receives a package of learning and teaching materials (case) for self-study, able to consult with teachers or tutors of a course); TV technology (basic teaching procedures - viewing video lectures); network technologies (access to learning and teaching materials, and also consultations through telecommunication technologies and networks). [11] In addition, teachers need to improve their competence in employing various techniques and forms of conducting classes with use of pedagogic education software. As part of the process of creating a unified information space of a University, including computerization not only of education process, but scientific, administrative, economic, and

administrative management, teachers need to master skills of navigation in an information space, and the ability to make rational use of software products that provide these processes. [12]

As the subject of the process of education informatization (sixth segment of axioframe) teachers need to possess skills to design and implement copyright courses, teaching materials based on ICT into the education process; form their own professional pedagogical image in an information space of an University (region, country) through creation and maintenance of their own sites and pages in social networks, etc. In addition a teacher is forced to improve his competence in the rational use of education activity of students of the opportunities offered by new generation of various personal mobile digital devices. The fact that a teacher is also involved in the process of implementation of integrated automated control systems of structural subdivisions of an education institution, based on computerization of processes of planning, documenting and controlling the quality of the education and pedagogic processes, determines the need to build a subjective position in the rationalization of use of those resources and technologies.

As a member of the professional education community (seventh segment of axioframe) a teacher needs to master modern computer communication tools, as well as operational exchange of education and pedagogic information. [13] Another focus in improving professional and pedagogic communication is development of a capacity of a teacher for group computerized interaction, learning (development of) the culture of online communication.

As part of development and forming education values and meanings in the context of education informatization (eighth segment) a teacher is required to understand and accept the nature of an information society and education; know the basic directions of ICT use in a modern higher school; have knowledge about the generations of information teaching technologies, about kinds and types of software and hardware and standard computer technologies of training; have ideas about psychological aspects of computer-based training and its advantages, disadvantages, development trends. [14]

Defining the target- and content-based outlines of lifelong education of a higherschool teacher in acquiring and developing *the* ability to rationally apply modern information resources and ICT to their professional life allows to outline the axiological orientation of his education in the solution of the formulated problems (the axio-semantic grounds, axio-justified logic of education activities).

The key axio-semantic grounds in this respect are:

- the nature of values and meanings that regulate research and education activities of a teacher of higher school (social, cultural, organizational, professional and personal), which determine the specificity of norms, traditions and modern state (public) requirements, values, trends, occupational stereotypes, myths, beliefs of each of these components of professional activity and determine the peculiarities of the process of mastering

those or other components of the declared capability; [15]

- differences in development levels of axiological worlds of professionals, defining the value-based stage of professionalization of teachers (subjective, social, personal, socio-cultural), which, in turn, leads the way in development of the claimed ability to be the most optimal for each professional.

Axio-based logic of development of the declared content of lifelong education must correspond to the logic of development of axiological bases of life. N.O. Verbitskaya's andragogic scale of action in building a new professional and life experience is supposed to be the technological key: its lower boundary is the activation as a process of identifying (detection, fixation) the experience (knowledge, values, meanings, and so on.) by means of memories (remembering); intermediate stage is actualization, suggesting the formation of a new perception (attitude, understanding) of the aspects, fixed at the prior levels, according to the educational aims; the upper limit is the transformation as the process of conversion of the actualized, its interpretation in the new suggested context, its correction, enriching it with new knowledge, skills, meanings, etc. [16]

The outlined axiological, target- and content-based benchmarks of lifelong education of a higher school teacher in the context of formation and development of the studied capability are the basis for designing and implementing of such education of a professional, that will allow him to harmonically develop as a professional, who rationally applies modern information resources and ICT to his professional life.

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