



Continuous Professional Education of Specialists in Demand in the Labor Market with the Help of Information Technologies

Sergeeva M.G.¹, Nagaeva S.N.², Firova I.P.³, Pudovkina O.I.⁴, Solomonova V.N.⁵,
Sidenko I.K.⁶, Ignatjeva O.A.⁷

¹Doctor of Pedagogic Sciences (Advanced Doctor), Associate Professor, Research Institute of the Federal Penitentiary Service of Russia, Russia, nii@fsin.su,

²Candidate of Pedagogic Sciences (Ph.D.), Associate Professor, Industrial University of Tyumen, Russia, general@tyuiu.ru,

³Doctor of Economic Sciences (Advanced Doctor), Professor, Russian State Hydrometeorological University, Russia, rshu@rshu.ru,

⁴Candidate of Economic Sciences (Ph.D.), Associate Professor, Russian State Hydrometeorological University, Russia, rshu@rshu.ru,

⁵Candidate of Economic Sciences (Ph.D.), Associate Professor, Russian State Hydrometeorological University, Russia, rshu@rshu.ru,

⁶Candidate of Economic Sciences (Ph.D.), Associate Professor, Russian State Hydrometeorological University, Russia, rshu@rshu.ru,

⁷Associate Professor, PhD in Sociology, St. Petersburg State University, Russia, info@rlci.spbu.ru

ABSTRACT

Post-industrial society is the beginning of the transition to a new type of civilization development, which is associated not only with the technological revolution, but also with the modernization and restructuring of the professional education system. The influence of such factors as the globalization of education, the transition to an innovative system of training, the transformation of professional education, makes it possible to consider continuing professional education as a component of global education of the individual. The socio-economic situation in Russian society has revealed processes that prove that the dynamics of economic changes exceeds the dynamics of the individual's ability to adapt to them. The acquired knowledge and professional competences formed during training are limited, and the acquired norms and values do not become reference points in the changing world and are subject to reassessment. The changes taking place in Russia have revealed a serious shortage of specialists with knowledge and experience in decision-making in a market economy, and have caused an increase in the need for such specialists. A developing society needs fully educated, enterprising people who can make their own decisions in a situation of choice, are capable of cooperation, characterized by mobility, dynamism, constructiveness, have a sense of responsibility for the fate of the country, its further prosperity.

Key words: market economy, competitive specialist, professional competences, demand in the labor market, continuous professional training.

1. INTRODUCTION

Professional education is the most important prerequisite for scientific and technological progress, ensuring sustainable socio-economic development of all spheres of life of the state. It is aimed at achieving universal professionalization of society, meeting the needs for differentiated professional educational services, serves as a means of formation, development and self-affirmation of the individual.

The existing educational systems in different countries were formed historically under the influence of socio-economic processes, the development of social life, historical factors, national differences, etc. From the diversity of educational systems, we can distinguish a multi-level (multi-stage) education system and a more conservative mono-level one [1-8].

On the one hand, professional education system is one of the main institutions of socialization and formation of harmoniously developed, active, creative personality, ensures the reproduction and development of human resources of the society. The realization of the goals of professional education is carried out in cooperation with the socio-economic environment, the dynamic change of which predetermines the conditions of activity of educational institutions. The acceleration of scientific and technological progress in all areas of knowledge sets the task of ensuring the continuous growth of professional skills throughout life. The need for a system of continuous professional training of specialists is clearly manifested. Structural and institutional restructuring of professional education is reflected in various models of integration of primary, secondary, higher professional education,

additional vocational education, the creation of university complexes [9-12].

In the conditions of the country's transition to a market economy, there is an urgent need for a system of training that could respond quickly and adequately to changing market conditions. In this regard, the idea of the need to strengthen the emphasis on fundamental education, which has a longer survival time, more conservative and which, if it is properly formed, allows moving "from education for life to lifelong education". Lifelong education is seen as the only opportunity to be in demand in any socio-economic environment. It is the market economy due to the extreme mobility of its conjuncture that forces people to learn constantly and retrain in the case of a change of work or profession, and in the case when a person remains in his workplace for a long time. The qualification acquired by the employee earlier shall be brought into compliance with the changing qualification requirements or brought to the level required for work in a new profession, a new type of labor activity. The market economy also requires constant operational training in new professions, which were not previously available [13-22].

2. LITERATURE REVIEW

Pedagogical problems associated with the development of professional education, the peculiarities of its reorientation in the new economic conditions are reflected in the works of: P.R. Atutov, S.Ya. Batsyshev, A.P. Belyaeva, Yu.K. Vasilyev, A.T. Glazunov, E.F. Zeer, V.A. Kalney, V.M. Kuznetsov, A.M. Novikov, T.S. Panina, V.A. Polyakov, I.P. Smirnov, E.V. Tkachenko and other authors.

The results of these studies determined the most important concept for the development of vocational education, on the basis of which the strategic steps of the reorientation of professional education are worked out, which allowed going to new professional school models: a multilevel, multifunctional and multidisciplinary professional educational institutions able to implement the diversity requirements of "customers".

The content of activity and features of development of new types of educational institutions are reflected in the works of S.Ya. Batsyshev, V.P. Bepalko, A.M. Novikov, L.G. Semushina, L.D. Fedotova, P.S. Heifetz and others.

In the works of N.I. Voropaev, N.R. Galiullova., T.M. Korovina, T.Yu. Lomakina, M.G. Sergeeva, L.G. Semushina, O.V. Chitaeva and others problems of formation of the content of vocational education at the organization of continuous training are highlighted, where the learning content at each level varies considerably by activity of future specialists.

In professional pedagogy, the problems of content and organization of professional education at certain levels were studied by S.Ya. Batsyshev, A.P. Belyaeva, A.A. Verbitsky, G.N. Zhukov, I.F. Isaev, N.E. Kasatkina, A.I. Mikhaylushkin, G.V. Mukhametzyanova, A.M. Novikov, T.S. Panina, L.G. Semushina. In their works, in particular, it is noted that along with universities, secondary special educational institutions are increasingly becoming market participants, and this predetermines their desire to

strengthen interaction with the external environment. The greatest changes in the last decade have been in the economy, in particular the service sector, namely trade and economic activity. The active development of private enterprises, the updating of tax, accounting and trade legislation contributed to the continuous change in the requirements for specialists of trade and economic profile, while the lack of mobility in the management system of institutions of primary, secondary and higher professional education, training such specialists became clear.

Foreign (H. Gummel, J. Delor, F. Coombs, etc.) and domestic (A.A. Verbitsky, A.P. Vladislavlev, B.S. Gershunsky, A.V. Darinsky, E.V. Kalinkin, V.I. Kuptsov, V.S. Lednev, etc.) scientists were engaged in the study of problems of continuous education in the 70-80-ies of the last century.

The development of the concept of continuous education was carried out by the formulation, refinement and development of its main functions. Initially, a number of authors (A.P. Vladislavlev, V.I. Kuptsov, etc.) consider continuous education as a problem of adult education. Its purpose is seen in the compensation of shortcomings, omissions in previous training (compensatory function) or in the replenishment of knowledge in connection with the new requirements of life, profession (retraining and advanced training). At the same time, "continuity" is interpreted as a system of additional training and retraining of an employee after receiving and on the basis of an official certification (certificate, diploma) of completed basic education, which is implemented through various courses, postgraduate and other forms of study aimed at updating, expanding and actualization of professional information. This approach in the definition of continuing education is more focused on solving the practical problem – to achieve more effective human participation in production and has some disadvantages.

In the 90s of the last century, a new wave of research on continuing education began. S.Ya. Batsyshev, A.P. Belyaeva, G.N. Zhukov, N.E. Kasatkina, M.V. Klarin, M.I. Makhmutov, G.V. Mukhametzyanova, N.N. Nechaev, A.M. Novikov, P.N. Novikov, V.G. Onushkin, T. S. Panina and others made a great contribution to the improvement of the concept of continuous education. The publications of these authors trace a broader point of view on continuous education, according to which professional and general education of adults is organically combined (*integrative function*). It is noted that human education, realized through general and professional training, is not just a stage during which he is preparing for this life, but is an integral part of this life and permanently continues throughout his existence.

3. PROPOSED METHODOLOGY

The challenges facing education in the twenty-first century and its many forms affect the entire human life. Continuing education, meeting the needs of the modern level of development of society, involves the need to learn throughout life. Quality vocational education today is continuous. The specialist is able to improve constantly their skills in accordance with the changing requirements

for the nature of its activities. Continuing education defines new functions: instead of “transfer knowledge” it is necessary to “teach to learn”.

T. Yu. Lomakina notes that continuous professional education solves three interrelated tasks: improving the general culture, creating human resources and their modernization. The first task involves obtaining primary knowledge and general culture of education; the second task - the preparation of professional personnel, the formation of their basic knowledge and skills necessary for inclusion in the market economy; the third is the modernization, development of human resources for the purpose of rapid adaptation to the changing conditions of production and social life. T. Yu. Lomakina identifies the following components of education: general education, vocational education, postgraduate education and additional education.

T. Yu. Lomakina developed the structure of continuous professional education, which allows providing flexible and rapid training and retraining of professional personnel with the expansion of horizons and the formation of a holistic personality. However, in this structure, according to the author, there is no concept of professional orientation, which is an independent side of continuing professional education, which is implemented throughout the life of the individual.

The structural organization of the system of continuous professional education is a complex of educational institutions that provide organizational and substantive unity, continuity and interrelation of all levels of professional education, jointly solving the problems of education, training and development of each person, taking into account current and future social needs, satisfying his desire for self-education and self-development throughout life.

The formation of the structure of continuous education is carried out through the expansion of educational opportunities for each person to realize their needs for new knowledge. According to A. M. Novikov, there are three possible vectors of human movement in the educational space: *firstly*, he can, while remaining at the same formal educational level, improve his professional qualifications, his professional skills. A. M. Novikov proposes to call it a “vector of movement forward”. *Secondly*, to climb the steps and levels of professional education is a “vector of upward movement”. At the same time, a person can either consistently ascend the stages and levels of education, or skip some levels and stages. *Thirdly*, a person can not only continue education, but also change its profile – “vector of movement to the side”.

Experience shows that the choice of the direction of movement on this or that vector is carried out by the person independently taking into account features of structure and the maintenance of its educational requirements at various stages of a life cycle. Thus, there is a possibility of preservation of continuity of educational activity and its extension for the period of adult life of the person.

Based on the above, it follows that the continuity of professional education provides the possibility of

multidimensional movement of the individual in the educational space and the creation of favorable conditions for its movement. Creation of such conditions is carried out by means of realization of some properties inherent in system of continuous professional education.

N. B. Koshkina identified the following factors characteristic of the modern socio-economic sphere and adequate socio-pedagogical conditions of continuous professional education (figure 1).

<i>Factors of social and economic environment</i>	<i>Social and pedagogical conditions of continuous professional education</i>
* High rate of professional knowledge obsolescence	→ 1. Focus on education and self-education throughout life
* Reducing the sphere of unskilled and low-skilled labor	→ 2. Building professional education on a fundamental basis
* Structural changes in employment	→ 3. Multilevel structure of economic education
* Changes in demand from the state, the individual, the market	→ 4. Variability of educational programs
* Limited time and material resources of the individual	→ 5. The readiness of the individual to the social dynamics
	→ 6. Variability of the structure and scope of specialists training
	→ 7. Adaptability of education levels

Fig. 1. Social and pedagogical conditions of continuous professional education

We consider efficiency of professional education of students taking into account features of process of professional training. It is important to take into account the complex of factors affecting these processes:

- vigorous involvement of the national education system in the processes of globalization, in particular, the Bologna process;
- methodological restructuring of the education system, transition to innovative education and personnel training;
- better reflection of the content of global education, its ideas, values and meanings at all stages of general and professional education;
- further development of new information technologies, creation of a unified educational environment integrated with the “world wide web” in the Russian education system;
- transformation of vocational education institutions into entrepreneurial-type organizations closely related to the economic, social and cultural development of the region, the country and the world; increasing on this basis

its contribution to the formation of the knowledge economy;

– creation of the system of continuous education covering all active life of the person; on this basis increase of the contribution of education to formation of society of knowledge.

4. RESULT ANALYSIS

The analysis of the literature allowed to define *competence* as an integral personal and professional quality of a person who has completed a certain level of education, expressed in readiness and ability on its basis for successful, productive and effective activities, taking into account its social significance and social risks that may be associated with it; providing the possibility of effective interaction with the world with appropriate competencies. *Competencies* are an open system of knowledge, abilities, skills, which are acquired in the educational process and adjusted during the period of practical activity. Expediency of introduction of the concept “professional competence” is caused by breadth of its content; the integrative characteristic uniting such frequently used concepts as “professionalism”, “qualification”, “professional abilities”, etc. In our study, we define *professional competence* as an integral personal formation, which combines a valuable understanding of social reality, categorical specific professional knowledge, acting as a guide to action, the subjective ability to self-determination, personal ability to implement professional technologies in the main areas of human activity.

The analysis of the state educational standards (SES) of three generations revealed:

- features of the first generation SES (mandatory minimum content of basic educational programs; maximum amount of training load of students; requirements for the level of training of graduates);

- features of the second generation SES (taking into account the tariff and qualification characteristics of the Ministry of Labor of Russia in the formation of requirements for graduates; coordination of requirements for graduates and the content of education with the Federal Executive authorities; simultaneous development of SES for all levels of education; development of standards for “enlarged” areas of training of certified specialists in the field of engineering and technology);

- distinctive features of the Federal State Educational Standards (FSES) of the third generation from the previous SES (limited regulation; independence of the educational program; modular organization of programs; competence as an educational result; orientation to the demands of the labor market). FSES provides a clear definition of “Competence – the ability to apply knowledge, skills and personal qualities for successful activities in a particular area”. The logic of this concept in relation to the sphere of professional education is that the student on the chosen profile of the specialty receives a certain necessary amount of basic (theoretical) knowledge; a set of methodologies and techniques for applying this knowledge in practice; a certain experience of such application (in the course of

educational, industrial and other practices, laboratory and independent work, etc.), and all these parameters should be evaluated equally. Competencies are divided into professional (specialization in certain areas of activity) and universal (necessary for an educated person regardless of the profile of training).

Our study showed that the implementation of the third generation standards takes into account the competence approach and is based on:

- *changes occurring in the labor market* (reorientation of demand for new skills and changes in labor organization; falling demand for unskilled manual labor; the spread of automated control systems of production processes; the decline of mass production; increasing the individual responsibility of employees for the quality of labor; increasing the level of interaction of employees in the team; blurring the boundaries between professions);

- *new requirements to training of the specialist* (labor activity is formed around processes, instead of operations; non-technical aspects of work - planning, coordination and communication, decision-making become essential; adaptability as the leading indicator of quality of the specialist training);

- *the mechanism of interaction of the labor market and the market of educational services* at different levels (federal and regional) of management, which involves the implementation of state policy in the field of vocational education and personnel training; providing the developing labor market with the necessary amount of specialists of the required profiles and qualifications, taking into account the main trends in the strategic development of the region’s economy; rapid adaptation of vocational training institutions and retraining of personnel to changes in the labor market, increase of personnel potential, professional mobility and competitiveness of employees;

- *the competence model of a graduate* of a professional educational institution, congruent to the developed structure of economic competence and containing seven blocks of competencies: educational, personal, intellectual, professional, communicative, information and economic. The block of economic competencies is allocated by us in connection with need of preparation of the specialist possessing a certain level of economic knowledge and capable to make adequate decisions in various social and economic situations irrespective of a specialty profile.

In the course of the study, the following criteria were developed to determine the formation of professional competencies of the graduate taking into account three levels (low, medium, high): cognitive-informative, personal, activity-creative. Each of the criteria is revealed through a system of empirical indicators that reflect the degree of formation of a particular component.

Cognitive-informative criterion reflects the range of available knowledge of a specialist in market economy and assumes that students, mastering economic knowledge (knowledge of economic laws, economic reality, methods of economic research, methods of formation of economic competence), will be able to assess adequately real economic situations, find and apply the necessary

information to solve them, as well as develop professional competence in the process of self-education.

The personal criterion reflects professionally significant motives and valuable installations of the personality, its positive attitude to mastering of knowledge and abilities, need of their application in practical activity; and also professionally significant qualities of the personality: thrift, independence, rationality, diligence, enterprise allowing the specialist to defend a position in making economically reasonable decisions.

Activity-creative criterion reflects the presence of professionally oriented skills that allow organizing production activities, identifying difficulties and determining ways to improve it; assumes the involvement of a specialist in the sphere of economic interaction between society and production, characterizes the direction of this activity from the point of view of its compliance with the complex of social requirements for confident economic behavior, to effective economic activity in market conditions.

5. CONCLUSION

Based on the foregoing, we can formulate the main *characteristics of continuous education*: increased duration of the educational process for the entire life cycle; the vertical and horizontal integrity of the educational process; orientation to the progressive formation and enrichment of creative potential of personality. The study of the accumulated experience on the studied problem showed that continuous education is considered in the literature as “the process and result of personal development in a really functioning system of state and public institutions that provide the possibility of general education and special training of a person”.

The system of vocational education is part of the overall system of education of a person throughout his life. The formation of the system of continuing professional education is due to changes in the socio-economic environment in which it is implemented. Environmental factors determine the set of circumstances – social and pedagogical conditions that contribute to the effective functioning of the system of continuing professional education.

Training of specialists who are able to work successfully in a market economy, with a certain level of professional competence, becomes an important and urgent task of modern education. In this regard, there is the need to solve government problems of continuous professional education, which is reflected in the requirements to the content of education enshrined in the RF Law “On education in the Russian Federation”, the report “Russian education-2020: model of education for the economy based on knowledge”, the strategic objectives of the National Doctrine of Education Development of the Russian Federation (until 2025) and other laws and regulations.

Continuous professional education should develop into a system of support for continuous self-development of a person in new socio-economic conditions –only in this

case a person becomes a subject of life and professional activity, which will allow them realizing as a participant of transforming social interaction. In this case, their self-affirming subjectivity is also formed; their professional position becomes innovative or the position of the creator; in the process of self-development there is a registration and development of their value orientations and the statement of professional and human dignity and self-esteem.

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