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TOWARDS THE EFFECTIVENESS OF ADVANCED TRAINING OF ENTERPRISE PERSONNEL

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Abstract

The Law dated December 29, 2012 No. 273-ФЗ "On Education in the Russian Federation" defines a new level of continuing professional education (CPE) as a system implemented by an educational organization independently according to educational programs developed by its specialists with an orientation to the basic professional competencies of federal educational standards of higher education. However, the complex socio-economic conditions for the implementation of educational activities, including advanced training, require the development of conceptual provisions, new forms and conditions for the implementation of educational programs for continuing education. An important role in the effective organization and effective quality implementation of retraining and advanced training processes is the creation and use of scientific, methodological and organizational support for educational activities. The primary in the problem of ensuring the conditions and means of educational activity is the scientific justification for their creation, and the second is the design and development, and in third place is their methodical application. The problem of ensuring the process of professional retraining and advanced training is, first of all, the scientific-organizational and didactic-methodical problem of the scientific substantiation of its composition, structure and content, the role and place of this support and the establishment of organizational and methodological conditions for its effective application in the educational process. This can be done by creating an information and educational environment for the organization, whose participants can be educational organizations and industrial enterprises that implement a network form of implementing educational programs.

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Keywords: Educational environment, continuing education, methodological support, educational activities.



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1. Introduction

An important place in the methodological work of the continuing education system is given to the issues of integrated scientific and methodological support of educational activities. The significance of this work is also emphasized in the State Program of the Russian Federation “Development of Education” for 2013-2020, in which, within the framework of the main activities of the subprogram “Support for the implementation of the State Program and other measures in the field of education”, measures are envisaged for regulatory, scientific, methodological and methodological support for the development of the education system. A review of e-learning systems in the context of the system of providing information services to higher education, practical issues of choosing a virtual educational environment, as well as questions on the implementation, management and maintenance of services for students are considered in the work of Paul Catherall (2005).

Networking at present is a focused informational interaction of individual educational, industrial and commercial enterprises that have a common regulated goal, supported by regulatory acts and contracts, which creates the conditions for creating an informational and educational corporate environment (Sadulaeva, Yusupova, Sadulaeva, Vazkaeva, & Mutsurova, 2019).

In the context of this study, continuing education is understood as a continuous process of improving the professional knowledge, skills and experience of specialists in the enterprise, transforming this experience into the property of the enterprise using special methods and various forms of organization of the educational process in a new type of advanced training system with emergent properties and continuity.

2. Problem Statement

The relevance of the study is due to:

- increasing the requirements of modern society to the level of training of specialists of various profiles;
- the possibility of introducing information, competency and systemic approaches into the professional training and retraining of specialists as a methodological basis for organizing and improving the educational process;
- insufficient development of the scientific basis for the use of information and communication technologies and technologies in the continuing education system;
- the requirement to develop a system of scientific and methodological support for the training of specialists as a single integrative complex, which is characterized by the unity of theoretical and practical components, depending on the profile of the specialty;
- the requirement for the effective use of modern pedagogical technologies in order to integrate achievements in the field of network education in the process of professional training of specialists;
- the need to develop guidelines for teachers of the continuing education system aimed at developing the competence of specialists depending on the profile of training;

- the possibility of using integrative forms and training methods in the real process of professional development and retraining of specialists.

3. Research Questions

The subject of the study is a system of advanced training in the conditions of the information and educational environment.

4. Purpose of the Study

The purpose of the study is to study and theoretically substantiate the advantages of the information and educational environment of an enterprise and the network interaction of universities and enterprises in the context of the formation of professional competencies of enterprise personnel.

5. Research Methods

To solve the research tasks, a set of interrelated research methods was used: theoretical - the dialectic method of cognition of reality, structural and functional analysis of the conceptual provisions of the study to determine the nature, structure and features of the scientific and methodological support for continuing education as a system; provisions on the leading role of activities in the formation of personality, on the relationship of man, science, production, technology and education, the theory of openness and the advancing nature of the development of the education system, a content analysis of normative and methodological documentation (legislative documents, programs, textbooks and manuals) in order to clarify pedagogical opportunities of continuing education programs for the formation of professional competencies of specialists in the information and educational corporate environment; empirical – observation, survey, questionnaire, testing.

6. Findings

In the study, methodological approaches to the development of a system of educational and methodological support for advanced training, methodological problems of supporting a network form of training in a corporate-academic partnership, a methodology for designing interactive educational content, as well as the theoretical foundations of the concept of scientific and methodological support for the information and educational environment of the enterprise in the information and educational corporate environment.

The quality and effectiveness of the system of continuing professional education to a large extent depends on how fully and comprehensively it reflects in the content, means, methods and organizational forms of the requirements of the socio-economic development of modern society. With all the evidence, in the process of pedagogical design, when developing a system of scientific and methodological support, structural, functional and substantial models of advanced training and retraining of specialists based on corporate partnerships, it is necessary to take into account both modern trends in professional pedagogy in

the direction of training highly qualified specialists and the future in solving the problem of fulfilling the social order of society.

As the first provision for the design of the pedagogical system of educational and methodological support for the information and educational environment of the enterprise of specialists on the basis of training, we take a systematic approach. The concept of a system of scientific and methodological support for advanced training based on corporate training is based on the idea of a gradual transition from a system for developing continuing education programs by relevant structures in universities and institutes of further education to the development of relevant training modules with the participation of leading specialists from enterprises and holdings, from which individual programs for students. In the corporate training system, the most acceptable harmonious combination of numerous methods and technologies of full-time and distance learning.

The second provision of the developed pedagogical system of educational and methodological support for advanced training is the conformity of the designed model to the acceleration of the socio-economic development of society.

The main trends in socio-economic development can be considered: accelerating the pace of development of science and the practical application of scientific discoveries in production; development of new technological foundations of production, innovative technological processes and types of materials; the complexity of new technologies, as well as the increasing abstractness of continuous production processes, requiring an increase in the role of the connection of theoretical knowledge with practical skills; the emergence of new branches of knowledge and innovative technologies; introduction of creative marketing elements and quality assurance systems into production; the connection of scientific knowledge with the advent of new methods and technical means of computer design and production, etc. (Haddon, 2004).

The third provision for designing a model of a system of scientific and methodological support is the choice of the principle of professional expediency as a system-forming factor. We list the rules for implementing the principle of professional expediency: selection of content, methods, tools and forms of training, taking into account the characteristics of the specialty and to help master it; the formation of professionally important qualities of students; expanding the scope of knowledge about professional activities; the use of training for the continuous development and formation of personality.

Thus, professional development and retraining of a specialist should be based on a multi-aspect view of him as an active subject of the educational process and creative self-development. Functional role and personality-activity models form professionally important qualities of a specialist (Khataeva & Surkhaev, 2015).

The fourth position of the projected model of the system of educational and methodological support for professional education of specialists is the interaction of the principle of professional expediency and the principles of humanization, motivation for learning and work, continuity, integration.

The dynamics of the process of advanced training and retraining of specialists in the corporate training system are given by the observance of the principle of continuity. It consists in the fact that such pedagogical dimensions as the present and future in their interaction work for the integrity of the formation of personal and professional competence of technical specialists in the field of professional

competence. It follows that the design of a model of a system of scientific and methodological support for professional training of specialists in the corporate training system should be based on the creation of conditions for the gradual formation of professional skills in the field of professional activity. This approach is the essence of the fifth position of designing a model of a system of scientific and methodological support for professional training.

The sixth position is that professional development adequate to the requirements of educational practice and retraining of specialists on the basis of corporate training should be based on personality-oriented, androgynous, activity-oriented and contextual approaches, which is closely connected with the humanization of education.

The culture of the information society involves the study of not only the cognitive, but also the emotional, personal and behavioral aspects of the process of information socialization. At the same time, information can be considered as one of the ways of organizing, structuring the image of the world, which imposes special responsibility on information carriers and ways of its presentation to adolescents and youth (Luneva & Fomichev, 2014).

As noted earlier, in the design of the pedagogical system, the definition of a system-forming factor is mandatory. When designing a system of scientific and methodological support for professional training of specialists, the principle of professional expediency was chosen as a system-forming factor. This principle allows the selection of content, methods, tools and forms of training, considering the characteristics of the specialty and to help master it, to form professionally important qualities of students that facilitate the development of the profession and the performance of professional functions.

The principle of professional expediency passes through all the elements of the designed system model and determines the methodology, methodology and nature of the training technology to achieve the integrated goal. The purpose, content, means of pedagogical communication, teaching and learning, must meet the requirements of the principle of professional expediency.

The noted dependence is an objective reflection of a systematic approach to the organization of education, which forms the basis for the development of pedagogical theory at the present stage.

Currently, networking is a fairly common technology for information support of scientific and academic partnerships. However, to improve the qualifications of specialists, where the practical component is crucial, network interaction should be carried out not only by specialized universities, but also by innovative industrial enterprises, united by a common information and educational communicative environment.

Among the main advantages of network interaction are noted: prompt response to external and internal changes due to the ability to modify and attract new components of network interaction; openness and accessibility to connect an unlimited number of participants; the possibility of concentration of resources and activities in priority areas of educational activity; lack of support costs for the traditional administrative apparatus; optimization of the use of labor potential of teachers and tutors; Attracting leading scientists and industry specialists to training; use of best practices; obtaining a synergistic effect due to the intranet exchange of data and knowledge; territorial mobility, flexibility, the ability to connect an unlimited number of participants and quickly change the network topology.

The study determined that the system-forming factor of the personnel training system is the principle of professional expediency, the fulfillment of the requirements of which contributes to the achievement of the goal of training a technical specialist for high-tech innovative production.

Digital educational environments are becoming increasingly popular in higher education and training. Teaching and learning through webinars and web conferencing in a broader sense is one widely used approach. Webinars are defined as webinars in which participants and facilitators communicate live over the Internet in remote geographical locations using common virtual platforms and interact everywhere and synchronously in real time using voice over IP technology and webcam equipment (Gegenfurtnerab & Ebner, 2019).

Based on the concept, components of the model and technology are developed in the professional training of specialists, based on the principle of integrability, combined resources, requirements of pedagogical design: adequacy, consistency, staging, synergetics and an activity approach.

A three-level structural and functional model of the system of scientific and methodological support for additional professional training of specialists in the information and educational corporate environment, developed with the help of pedagogical design and modeling of educational activities, as well as models of its main components: the model of the Unified Center for Corporate Training, the model of three-phase corporate training in network system, "petal" model for the formation of modular advanced training programs ii, a model structure of the training module, a multicomponent model of the content of the training module, the competency model of a technical specialist.

The basis of the developed models is the concept of educational and methodological support of vocational training, on the basic principles of which all methodological and technological solutions are based on the implementation of vocational training.

To develop and implement models of the system of scientific and methodological support of vocational training in the study, four design phases were used: conceptual; modeling phase; system design; phase of technological preparation.

The overall goal of creating a system of scientific and methodological support for vocational training is to support the continuous retraining of specialists (personnel of enterprises and universities) in order to fulfill their tasks in accordance with the state's social order to provide modern innovative production with qualified personnel based on corporate-academic partnership and combined resources .

When designing all the components of the system under consideration, we proceeded from the paradigm of a hierarchical sequence of results of pedagogical design, to which V.M. Monks: pedagogical system, systems of scientific and methodological support for professional training of specialists in the information and educational corporate environment; corporate training management system; technological support system; educational process design.

The concept of "information and educational environment of the enterprise" is used in the study to indicate the interaction of specialists in the field of education and production within the framework of vocational training that occurs with the implementation of various subsystems, the set of which can be expanded with the advent of new tasks and conditions, and the coordinated functioning of which is aimed at the formation of qualified personnel. Using the network form will allow accumulating in the training

the components of all educational computer technologies: e-learning, distance learning, smart-learning, etc.

In a generalized form, the educational and methodological support of vocational training in the information and educational environment of the enterprise as a pedagogical system includes the following clusters:

1. Didactic and methodological support: didactic conditions for the implementation of educational activities (laws and theory of instruction, didactic principles of instruction, criteria and indicators for assessing the effectiveness of instruction); methodological conditions for the implementation of educational activities (psychological and pedagogical training mechanisms, teaching principles, methods and pedagogical educational technologies for professional retraining and advanced training of employees.

2. Educational and methodological support: educational and program documentation (additional educational modular program: curriculum, schedule, work programs, assessment materials, etc.); educational and reference literature (textbooks, including electronic, textbooks, teaching aids and recommendations; dictionaries, reference books, manuals, glossaries, catalogs, etc.).

3. Information and technological support: training tools (visual aids, technical training tools), information and communication training technologies and their resource support. Based on the selected approaches and principles of modeling, as well as the main functions of the developed system of scientific and methodological support of vocational training in the information and educational environment of the enterprise, we single out the main structural and functional components (subsystems): research; strategic planning; competency; didactic-methodical; educational-methodical; activity-technological.

The information and educational environment of the enterprise, which ensures the interaction of objects in the educational process, is characterized by the following features and capabilities: the main way of presenting educational content is hypertext (as a means of non-linear architecture for the presentation of educational material); visualization and modeling of studied objects, processes; personalization and adaptation of educational material to the level of a specific user; group and simultaneous work on a creative task; multimedia; feedback system through e-mail, webinars, video conferences and other Internet resources (Gorovaya & Shevchenko, 2016).

7. Conclusion

The study determined that the system-forming factor in the system of educational and methodological support for advanced training and retraining of specialists is the principle of professional expediency, the fulfillment of the requirements of which contributes to the achievement of the goal of training a specialist for the educational system and high-tech innovative production, in conjunction with the principles of humanization, motivation of learning and work, continuity, integration (Sadulaeva, Khataeva, Abdullaeva, Muradova, & Iusupova, 2019).

The main elements of the content of training in the information and educational environment of the enterprise are multimedia interactive educational modules, electronic educational resources, including open distance learning courses. Based on the problem areas identified in the course of the establishing

experiment, the specifics of the activity and the multi-aspect idea of the specialist as a subject of the corporate training process, on the basis of the competency-based approach, a specialist's competency model, criteria and level indicators and diagnostics of the formation of professional competencies in the process of advanced training in information and educational corporate environment.

Competence is considered as an integral characteristic of a personality that determines its ability to solve problems and typical tasks that arise in real life situations, using knowledge, educational and life experience, values and inclinations. The algorithm for the formation of the competency model of a technical specialist was based on the requirements of internal and external standards. The competency model of a specialist is a system of personality traits of a specialist, a goal, an ideal representation of the result of the educational system to create a specialist.

Considering the theoretical understanding and advanced pedagogical experience, on the basis of the system of scientific and methodological support for advanced training in the information and educational environment of the enterprise, a variably modular technology for implementing its designed content has been developed.

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