SELECTED IMPLEMENTATION OF EDUCATIONAL TECHNOLOGIES OF MANAGEMENT IN THE CONDITIONS OF CONTINUOUS EDUCATION IN UKRAINE

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ABSTRACT

In the article, from a modern standpoint, the content of the basic concepts of the study is clarified and disclosed: "educational technologies", "educational strategy", "educational potential", "educational climate", "strategic educational position" of the organization; "Educational and technological competence of a university teacher". The set of principles governing the process of adaptive design and implementation of educational technologies in postgraduate education has been substantiated: socio-political, reflecting the target setting of society and the state on the development of the education system and increasing the competitiveness of university graduates (focus on the needs of the individual and the requirements of the labor market, target prospects, accessibility and openness); systemic, determining the integrity of the former professional competence of a graduate (consistency, continuity, hierarchy of educational technologies); specific, revealing the features of the process of designing and implementing educational technologies adapted to the conditions of postgraduate education (dynamism, phasing, reliance on generalized educational technologies, modularity, multiplicity, alternative design solutions).

Keywords: Postgraduate Education, Qualities, Additional Training, Professional Education, Technologization.

INTRODUCTION

The stable functioning and development of the domestic vocational school is associated with its formation as the most open and flexible system that quickly responds to the state and development trends of the labor market. The new requirements for vocational education are most fully and promptly transmitted by the Post Graduate Education (PGE) system, which becomes the main link between the interests of the individual, society and the state, various levels of vocational education and sectors of the economy and social sphere, the requirements of employers and the requests of direct consumers of educational services. Additional professional education is the response of time to the requirements of the changed social, economic and cultural situation in the country. PGE, being one of the rapidly developing forms of lifelong education, is becoming one of the strategic priorities of the state educational policy.

In modern conditions, PGE is becoming an effective tool that bears the main burden of adapting students to the performance of new functional duties. The PGE system, more flexible and efficient, is becoming the final stage of professional education. Unlike higher professional

education, which creates a base of fundamental knowledge, skills and abilities of a specialist, PGE makes it possible to build on existing new skills that are in demand in the labor market, which makes it more competitive. This is especially relevant in modern conditions, when a fairly large percentage of graduates are not employed in their specialty.

Additional training of students is of particular importance for technical universities. (Zimnija, 2004; Vikhanskiy, 2006; Hutmacher, 2007) in their research proved that additional training of students, providing future engineers along with basic education with additional professional knowledge, skills and qualities that go beyond the main specialty, allows them to solve complex problems of modern production.

The modern stage of development of higher education is characterized by a steady trend towards the technologization of the educational process. The implementation of the educational model of training competent specialists is best possible in educational technology that allows you to effectively build the learning process, manage it, and obtain results in accordance with the planned goals. The focus of educational technologies on the practice of teaching, diagnostic goal-setting, guaranteed achievement of results, reproducibility allow us to solve problems directly related to improving the quality of engineering education.

Serious changes that have taken place in the vocational education system in recent years: increasing the importance of PGE as a component of the system of continuing vocational education; a steady tendency towards the technologization of the educational process when the problem of training the relevant teaching staff is unresolved; society's need for competent specialists formed on the basis of the use of educational technologies; increased requirements for the quality of educational technologies used in the PGE system; brought to the fore the problem of insufficient development of theoretical, methodological and organizational and methodological foundations for the design and implementation of educational technologies in the PGE.

METHODOLOGY

In the context of the dynamic development of new technologies, continuous technical re-equipment of modern production facilities, the employer is increasingly making demands not on specific knowledge, but on the competencies of employees. The criterion for the quality of preparation of graduates for professional activity is their professional competence, which implies the possession of the competencies necessary to perform professional activity.

The problems of the formation of professional competence were studied by (Lednev, 2002; Windeatt, 2011; Campbell, 2007). Professional competence is a characteristic of a specialist's personality, expressed in the unity of his theoretical knowledge and practical training, the ability to carry out all types of professional activity. Professional competence is viewed as a systemic integrative unity of cognitive and activity components, it allows a person to be successful professionally. The structure of a specialist's professional competence is determined by the types of professional activities that form competencies, each of which includes knowledge, abilities, skills and professionally important qualities of the specialist's personality. Competencies act as constituent components of professional competence; they allow you to put professional competence into practice.

In the process of obtaining basic vocational education, competencies are formed that are characteristic of all workers in the labor market of a particular industry. These competencies do not provide competitive advantages, although their presence is a prerequisite for professional activity.

The proposed competencies are distinctive competencies that characterize the individual characteristics of the system of knowledge, abilities, skills, abilities and personal qualities of the employee; they are complex and unique, are associated with customer satisfaction and are the basis of the employee's competitive advantage in the labor market. They actualize and develop the competencies formed upon receiving basic vocational education.

One of the priority directions in the development of the modern system of higher professional education is the development of an applied learning theory associated with the development of educational technologies (Braze, 2003; Piskunov, 2001; Vikhanskiy, 2006). The development of pedagogical knowledge, an increase in the number of methods, means, forms of organization of training, the identification of an increasing number of factors influencing the effectiveness of the educational process make pedagogical activity excessively complex.

The technologization of vocational education opens up the possibility of minimizing the negative consequences of pedagogical impromptu, transfers pedagogical practice to the path of preliminary design of the educational process, allows solving the problems of improving the quality of engineering education.

The advantages of educational technology over traditional teaching methods are as follows:

- In educational technology, the functions of a teacher and a student change; the teacher becomes a consultant-coordinator (and not only an informant - a controller), and students are given greater independence in choosing ways to master the educational material;

- Educational technology provides ample opportunities for differentiation and individualization of students' educational activities;

- The result of educational technology to a much lesser extent depends on the skill of the teacher; it is determined by the totality of its components.

Educational technology occupies a special place in the system of continuing professional education. If we consider the goal of training specialists as the formation of readiness to conduct innovative professional activities, then educational technology itself is an innovation in education. Traditional educational technologies provide sustainable assimilation of basic knowledge, skills, and abilities that are the basis for the formation of creative application skills necessary in innovative professional activities. Educational technology is a necessary, prerequisite for an innovative educational process.

In the system of professional education (both basic and additional), all generalized educational technologies are used to one degree or another by now, it is already clear that not a single technology in the process of its design and implementation in the practice of an engineering university retains its "sterility", full compliance with the main idea. Specific pedagogical conditions, leaving their mark, make it complex, poly technological.

The teacher, focusing on the pedagogical situations most often encountered in his practice, selects various elements from several generalized technologies that are most suitable from his point of view, thereby creating his own, new, specific technology for teaching this subject.

PGE plays a special role in shaping the professional competence of engineering graduates.

In modern conditions, its economic and social significance is increasing more and more, it becomes the basis for the formation of labor resources and the reproduction of the country's intellectual capital. Together with science, PGE reproduces the existing professional structure of the labor market and introduces innovative changes to it.

The complex of problems associated with the functioning and development of the PGE has its own substantive specificity, due to the characteristics of the contingent, as well as the originality of the tasks.

The specificity of services in the PGE system is associated with both great social significance and the difficulty of choosing adequate methods and technologies for teaching and monitoring performance. The features of PGE programs include a shorter life cycle compared to basic education (Zgaga, 2013).

The advantage of PGE programs is their short duration, the ability to choose methods and forms of organization of training, a flexible schedule of the educational process, widespread use of active methods and new learning technologies, increased requirements for their quality.

The specificity of the PGE subsystem is manifested in its distinctive properties: flexibility (adaptability), integrity, versatility, autonomy, multilevel, informational and organizational openness, accessibility, mobility.

The peculiarities of the PGE conditions, in which the core competencies of the graduate of an engineering university are formed, predetermine the specificity of the mechanisms for the design and implementation of educational technologies.

RESULTS

Thus, a significant place in the practice of using software for teaching purposes is occupied by computer simulation programs. They provide the study of the properties of the model, a visual representation of the studied material with the help of the model, the ability for the learner to choose the answer from the proposed ones. Most often, such software tools demonstrate the dynamics of the studied process, represented by the model, and provide control over what has been learned. These are simulator programs or demonstration programs, the purpose of which is to visualize educational material, visualize the patterns of the studied phenomena, processes, relationships between objects. In such programs, elements of programmed learning can be used, with their help, experimental and research activities can also be carried out. Computer modeling allows you to create situations that represent a certain aspect of reality for the study of its main structural or functional characteristics, enables the student to consider the basic elements and types of functions to recreate a certain reality (Cho, 2012).

Distance learning often uses such forms of classes as chat classes, web classes and teleconferences. Chat sessions involve the use of chat technologies, are held synchronously (all participants have simultaneous access to the chat). Web classes - distance lessons, conferences, seminars, business games, laboratory work, workshops and other forms of training conducted using telecommunications, etc. For web classes, specialized educational web forums are used - a form of user work on a specific topic, the problem with the help of records left on one of the sites with the corresponding program installed on it. Unlike chat sessions, they suggest the possibility of longer work and the asynchronous nature of the interaction between students and teachers. Educational teleconferences are conducted on the basis of mailing lists using e-mail, they are characterized by the achievement of educational objectives (Arrosagaray, González-Peiteado, Pino-Juste & Rodríguez-López, 2019).

In the educational process, you can actively use e-mail, which stimulates and facilitates the exchange of experience among teachers of various subjects; increases the interest of students in academic disciplines; makes it possible to use methodological techniques based on comparing students' own data and those received by e-mail; exchange of information between students and creation of databases on subjects. For example, the practice is to create electronic mailboxes for study groups, which receive information from teachers, a curator. Students receive additional literature on the disciplines studied, questions for tests and exams, assignments for self-preparation for seminars, practical and laboratory classes, etc. Laboratory reports, abstracts, articles from scientific journals, reports reviewed in the classroom, and other materials are also sent to the box. As a result, a database is compiled for each discipline being studied, to the materials of which students can refer not only during the training period, but also after its completion. Students can also consult with teachers, scientific advisers and curator by e-mail of great importance in organizing the educational process is the organization of the students' search for additional materials for classes using information technologies. This forms in them the ability to search for information according to a given criterion, to classify the selected material according to its significance and relevance to the content of the future project, the ability to use and highlight the most significant sections in information found on their own. Here, the effective work of the subjects of the educational process, the understanding by the students of the topic and the problem being studied, it is important for the teacher to plan a lesson, to create an information base.

DISCUSSION

The analysis of the problem of forming the professional competence of a graduate made it possible to reveal that additional professional education in modern conditions acquires an independent value as the main way of building a career prospects for a graduate of an engineering university in the labor market. At the university, the components of the professional competence of a specialist are gradually formed.

In the process of obtaining basic vocational education, competencies are formed that are characteristic of all workers in the labor market of a particular industry, the presence of which is a prerequisite for professional activity.

The study substantiates the need to introduce a new type of competence - core competencies, which are the basis of competitive advantage in the labor market. The competencies formed during the acquisition of basic professional education are updated and developed in the conditions of the PGE, acquiring the character of core competencies that are distinctive for a particular person.

Thus, the modernization of the teaching process in the postgraduate education system presupposes a gradual transition from traditional teaching methods, focused on the transfer of knowledge in a ready-made form, to modern methods aimed at developing the subjectivity, creativity, theoretical thinking of students, stimulating their activity, increasing their motivation contributing to their self-development, self-education and self-improvement (active teaching methods, learning using information technologies, etc.).

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