FUNDAMENTAL RESEARCH GENERAL PROFESSIONAL PROCESS DISCIPLINES ON THE BASIS OF GENERAL SCIENTIFIC DISCIPLINES

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ABSTRACT

In each of the principles deeply enough researched in pedagogical theory and practice. Dwell only on their main provisions of direct relevance to our study. It is known that education becomes fundamental, if it is aimed at identifying the underlying reasons and the substantive linkages between the various processes of the world and becomes complete. Study on fundamental research high school, in recent years, mainly with the integration of education into the global educational space and reflect his side such as: innovative education, advanced education elite training, two-tier system of training, competence approach, etc. The principle of professional orientation of study for high school is no less important than the fundamental principle, as it has always been, and will remain a professional. There are many interpretations of this principle, in accordance with them he reflects the following aspects of vocational training: vocational orientation of general education; professional orientation of vocational education to meet the challenges of providing the innovation way of development of the national economy; professional orientation of the individual to a specific profession, its capacity for engineering innovation. Consequently, methodical system of teaching at higher vocational school providing students contributing to the formation of engineering innovation should be integrated as a target program aimed at future professional innovation, as the end result rather than as the sum of the individual independent of each other.

Keywords: engineering, innovation, modernization, graduate, professional, didactic, problem.

INTRDOUCTION, LITERATURE REVIEW AND DISCUSSION

Conducting the analysis on individual methods, tools, and principles of learning, contributing to the formation of innovation engineering students If this will stick to the basic directions of modernization of higher vocational school, in conditions of transition economy countries on innovation way of development: fundamental research, professional competency.

Overall didactic problems of preparation of specialists in the field of engineering and technology considered in many works, which are analyzed and produced the modern requirements for highly qualified engineers, offered the profile, outlines the basic ways to achieve high quality maintenance of preparation of experts [1]. They particularly noted that the process of becoming a specialist, his upbringing are inextricably linked to the vocational orientation of the educational process.

Research on interdisciplinary relations shows that from the first days of the exercises must be freshmen to their future professional activities, for example, in the course of "Introduction to the field. This will cause the trainee informed interest in the chosen profession. In programming this course aim is to bring engineering specialty of undergraduate student to reveal its essence and at the same time, demonstrate the need to study fundamental disciplines for future mastering special disciplines. Future professionals should be, with the

Junior courses are aimed at work in the system of flexible automated production through targeted vocational teaching all subjects considering professional development student, noted that creative work characterized by a generally highly qualified specialists, capable to think not trite and take bold engineering solutions, that is, in fact, talking about the necessity of formation of innovative abilities Engineering activity.

For training the Organization of educational process is required, the use of problem-based learning, fostering interdisciplinary links, nurturing creative attitude towards finding the truth, the development of students ' abilities and skills analysis, synthesis, synthesis, classification, evaluation, production situation, etc as well as information modeling training can be arranged, as the implementer of intersubject links Informatics disciplines natural cycle. Many pedagogical studies are dedicated to fundamental research, in particular the professionalisation process of learning general professional disciplines on the basis of general scientific disciplines, primarily on the basis of General Physics [3]. Physics, because of the specificity of its subject objectively the most general laws of structure, movement and interaction of inanimate nature, is on the one hand, the leader of all natural sciences and, on the other hand, theoretical and methodological basis of modern Engineering and technology, the subject of labour, which so far are mostly inanimate objects of nature. In technical high schools physics aims to provide theoretical and methodological Foundation of General engineering training. At the present time, when the rate soared, the dynamism of development of science and technology, physics can provide the invariant core of special training of an engineer, making it resistant to rapid changes in depreciation of knowledge, capable of professional mobility, restructuring, work in continuously changing environment engineering.

In certain activities considered the prevailing trends of system science synthesis and general professional components of higher education [2].

Fundamental research, professional competency is a kind of scientific integration and is carried out within the framework of pedagogical theory and practice. In the structure of this integration, you can allot: factors, levels, components, integration tools, goals and results. In accordance with their combination there are three types of integration: inside structural (knowledge with knowledge and skills), between the structural (knowledge, skills, knowledge, experience, creativity and innovation) and external (skills with organizational forms). B methodological innovation abilities system engineering integration listed principles organized on the basis of all listed species:

- inside structural is carried out through the knowledge and science-integration obshheprofessionalnogo cycles disciplines;
- between the structural is performed by solving professional tasks with professionally designed content in terms of innovation activity;
-external integration is implemented through the use of all organizational forms of education.

This integration allows you to talk about the integrity of the methodical system, with its design, namely the selection of content, methods, forms and means of learning, the relationship must be implemented naturally scholarly, professional and specialized disciplines based on the implementation of the principle of fundamental and professional orientation and training them respectively to select Basic and professional training in the content of the material.

In General, the task of constructing a coherent system of training in technical universities is very multifaceted. The important place it occupies the problem of ensuring continuity and consistency in teaching professional and special disciplines of technological cycle, forming the core of training future engineers. In practice teaching of these disciplines so far largely remained untapped available theoretical and practical experience of pedagogical science, numerous methodological and methodological studies on intra-subject and between subject links. A large part of the technical disciplines of the cycle is based on some fundamental scientific theories, primarily physical. Therefore, the scientific knowledge of physics, possessing the highest level of scientific systematization and built in accordance with a common methodology, the science can and should regulate the Organization and development of the entire spectrum of engineering disciplines.

Fundamental research higher vocational education today is one of the priorities of the State educational policy and scientific-pedagogical research. The problem of fundamental research of education developed in relation to the technical and technological higher education based on fundamental natural-scientific knowledge. However, the didactic aspect of the problem developed enough. There are no system researches, revealing the didactic framework fundamental research education in relation to humanitarian education.

Study on fundamental research high school, in recent years, mainly with the integration of education into the global educational space and reflect his side such as: innovative education, advanced education elite training, a two-tiered system of training, competence approach, etc.

Thus, fundamental research and professionalisation of the learning process, is organizing a job teaching to develop students abilities to innovative engineering learning general professional disciplines. They reflect the main regularities of the learning process, and the tutor must in its work to focus on all of these principles as a coherent methodological system.

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