ПСИХОЛОГО-ПЕДАГОГИЧЕСКИЕ И МЕТОДИЧЕСКИЕ АСПЕКТЫ ПРОФЕССИОНАЛЬНОГО ОБРАЗОВАНИЯ

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ACTIVITY-COMPETENCE APPROACH TO EDUCATION OF FUTURE ENGINEERS

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Abstract. The essence of the activity-competence approach to higher education is dealt with, which promotes formation of essential for professional activity qualities, knowledges and skills, helping to fulfil professional duties in the chosen area.

Key words: activity, approach, competence, skills, personalty.

ДЕЯТЕЛЬНОСТНО-КОМПЕТЕНТНОСТНЫЙ ПОДХОД К ОБРАЗОВАНИЮ БУДУЩИХ ИНЖЕНЕРОВ

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Аннотация. Определена сущность деятельностно-компетентностного подхода к обучению в вузе, способствующего формированию у студентов значимых для профессиональной деятельности качеств, знаний, умений и навыков, обеспечивающих качественное выполнение функциональных обязанностей в выбранной профессии.

Ключевые слова: деятельность, подход, компетентность, навыки, личность.

ДІЯЛЬНІСНО-КОМПЕТЕНТНІСНИЙ ПІДХІД ДО ОСВІТИ МАЙБУТНІХ ІНЖЕНЕРІВ

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Анотація. Визначено сутність діяльнісно-компетентнісного підходу до навчання у виші, який сприяє формуванню у студентів значущих для професійної діяльності якостей, знань, умінь та навичок, які забезпечують якісне виконання функціональних обов'язків в обраній професії.

Ключові слова: діяльність, підхід, компетентність, навики, особистість.

Introduction

One of the tasks which are put by the society to the higher education today is forming learning skills which would provide future engineers with the ability to orient in the constantly growing information flow. What is the reason for the fact that even the excellent students graduating from the universities do not satisfy the employers? There can be several, but the main are those that only science requires high achievers theorists, but the most of jobs are connected with practice. The second is that professional training in higher schools is mostly oriented on knowledge, which has caused the crisis of the current system of educa-

tion. One more reason is that the information becomes quite obsolete very fast nowadays; it leaves behind the teaching cycle in secondary and higher schools, so transfer of information from the teacher to students becomes senseless. Teaching students to acquire knowledge themselves and use it in practice, thus accomplishing certain professional and social functions, is more important.

Recent Papers Review

The analysis of approaches existing in pedagogy and psychology today starts with the definition of the notion «approach to teaching». In broad sense this term is understood as a worldview category reflecting social principles of students as bearers of social conscience. In the practical aspect the approach to teaching is understood as global and systematic organization and self-organization of the teaching process including all its components.

The activity approach was dealt upon by P. Galperin, A. Leontiev, L. Vygotsky, S. Rubinshtein and developed in works of B. Badmayev, V. Davydov, I. Illyasov and others. According to O. Leontyev's concept, activity is a system of processes through which a person's worldview, his system of values are realized [1, 2]. Personality, by S. Rubinshtein, not only shows itself, but is formed in activity. One of the types of activities which help personality formation is an activity of learning. With the activity approach not only separate elements of learning are analyzed, but learning activity on the whole. This approach suggests considering teaching as an activity comprising actions united by a single motive and directed at achieving a single aim – mastering the experience of former generations which satisfy the cognitive demand of a subject of teaching [2]. The changes in the students' psychic, saturating it with new elements and new qualities are the product of teaching. Learning is an activity on changing oneself.

Purpose and Problem Description

The aim of the article is to determine characteristics of activity-competence approach as the one that promotes forming personal characteristics important for students' future profession as well as knowledge and skills ensuring quality accomplishment of their functional duties in the chosen area.

Activity-competence approach to education of future engineers

The activity-competence approach is a hybrid of activity and competence approaches, so the main aspects of the approach are activity and competence components.

Students' participating in the learning process on the base of this approach is connected with their mastering knowledge, skills and habits as well as providing conditions for forming new actions and notions with given qualities [4]. The process of acquiring a new sense and transformation of the current sense (information, knowledge, skills, habits) can be involuntary or specially organized. It can be considered as a single process of transfer and mastering concrete sense.

Principles of the activity approach in pedagogic psychology were developed by the founders in the context of teaching children. The teaching of adults based on this approach can be accomplished on the base of the theory of planned formation of mental activities proposed by P. Galperin. As far as in the middle of the 20th century he put the question in his research: why does a person study? And he answered: in order to learn how to do this [1]. So, the aim of study is giving a future specialist possibility to act, and knowledge must be a means of teaching how to act.

Such learning gives quality different results: the teaching process is shortened; division into the stages of mastering knowledge and its usage is minimized, students start being interested in the process and the results of study. It is achieved due to the fact that he can see the totality of interconnected landmarks and instructions providing fulfillment of the necessary activity with appropriate indices. Activity is fulfilled under control. Those who study adopt the program with insignificant individual fluctuations, they acquire the ability to transfer the acquired knowledge in new conditions including the rare ones [3]. The condition or teaching adults and their mastering necessary contents is the ability to study, which also must be learned, capacity to study, to master new experience, determined by the system of social relations. Interactions of those who learn and those who teach, establishing the teaching activity itself as self-regulating, self-organizing, and self-actuating is essential.

The base of the activity approach in education is activity, i.e., the form of active purposeful interaction with the world around (including other people), which meets the demand for this interaction. «The precondition of any activity is this or that demand. But the demand itself cannot determine the concrete direction of activity. The demand obtains its precision only in the subject of activity: it must, as they say, find itself in it» [2].

Competence approach is aimed, first of all, at achieving certain results, special competence. Mastering competence is impossible without acquiring the experience of activity, i.e., competence and activity are closely interconnected. Competencies are formed in the process of activity and for the future professional activity. In these conditions the process of teaching is transformed into the process of acquiring knowledge, skills and experience of activity aimed at achieving professional and social competencies [5].

With the activity-competence approach the tasks of giving knowledge and skills mean to form such competencies and types of activity that include the given system of knowledge and ensure its usage in given limits. That is, mastering and development are not two mechanisms but two mutually influencing sides of a single process of changing the student. This very approach has made necessary and real the withdrawal from classic models of teaching to the model which ensures development of a student as a subject of teaching.

The essence of the activity-competence approach is the following: the student is in the centre of teaching, and his competence is formed on the base of a renewed content of education, and the process of mastering is active in nature. Accordingly, the teaching technologies must be directed at forming in the future specialist the abilities to accomplish various types of activity, and while doing this the specialist will master new competences.

Conclusion

So, based on the above mentioned, we can make the following conclusions. In the activitycompetence approach the results of teaching are expressed not only by some phenomenal indices of mental development of students, but of general direction of this development. The ultimate goal of learning is formation of the way of activities; any teaching knowledge is at the same time teaching mental activities, and formation of mental activity is impossible without certain knowledge. In terms of teaching goals activity and actions are primary, not knowledge. The content of teaching is not the given system of knowledge and its consequent mastering, but the given system of actions and the knowledge that ensures mastering by this system. To know means not only to remember some knowledge but to perform certain activity connected with this knowledge, because competence is not limited to skills and knowledge, it includes them in itself, as they are the form of its manifestation at different stages of formation. The nature of competence becomes apparent only in conditions of personal interest in a particular type of activity. And, naturally, learning is the crucial factor in competence formation.

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