FEATURES OF THE MAIN COMPONENTS OF THE PROCESS OF FORMING RESEARCH COMPETENCIES OF FUTURE ENGINEERS

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Annotation. The article analyzes the main difficulties and obstacles in the research activities of students, organizational and pedagogical conditions for the formation of research competencies. The approaches to the construction of educational technologies that contribute to the effective development of research competencies of future specialists are substantiated.

Keywords: Students, research competence, research activity, cognitive barriers, needs for continuing education and self-development, intelligence map, individual styles, intelectual activity.

Аннотация. В статье анализируются основные трудности и препятствия в научно-исследовательской деятельности студентов, организационно-педагогические условия формирования научно-исследовательских компетенций. Обосновываются подходы к построению образовательных технологий, способствующих эффективному развитию научно-исследовательских компетенций у будущих специалистов.

Ключевые слова: Студенты, исследовательская компетенция, исследовательская деятельность, когнитивные барьеры, потребности в непрерывном образовании и саморазвитии, интеллект-карта, индивидуальные стили, инттелектуальная деятельность.

Education of students in forming independently of the activity of planning it tadqiqotchilik kompetentsiyasini exercise, perform and should be organized in a

way that can take control. This education process based on the principles of the total number of pedagogical education of various modern approach (systematic, effective-kompetentli, rational, is not allowed. - effective) due to the introduction of it.

Study the many facets of the process complexity and species taking skills, humanitarian, tizimlilik, boshqaruvchanlik eligibility and principles, as well as the regulating principle of the system rasional the form of others are intertwined with the principles of the variety of different and diverse of his suit irrasionallik the highlight of the principles can be rasional.

Synthesis research tizimlilik principle is applied in the stage, it reflects the main qonuniyat as a social system of the educational process. For the correct organization of the scientific work the system and also, the rational management is also necessary. Therefore it is very important to follow integrasiyalanishga and integrity in the education system.

Any system, the system also including teaching specific “systematic requirements” there are, that is, is that it allows you to keep:

algorithm and program of action;

the nature of formation of the system of scientific management and its elements methods.

Talking about the system requirements, the functional relations within the system should forget about all of them lower effective use of the system leads to rational management.

The principle of controllability implies the application of Basic Rules, requirements that the governing subject adheres to in the formation and implementation of managerial influence. This principle acts as the main form of conscious and optimal use of the laws of Management in the practice of managing the educational process in Mechanical Engineering. This principle defines the following requirements for the quality management system of the machine learning

process: stability, flexibility, openness, rationality; to the rational organization of the process of learning science: efficiency, speed, economy, prediction; quality of education: compliance with the standard, scalability. The implementation of this principle implies:

on the subject of the educational process and scientific quality management system engineering methodological create functions in the formation of its structure systematic and targeted approach implementation;

the subject of criteria for the quality management of the process of engineering education-the formation of the appraisal framework;

development and application of modern educational technologies in the educational process as a factor rasionalizasiya engineering, and students in the learning process of managing the activities of the organization as a set of requirements and methods of use and methods.

Rasional the principle of the learning process, because it refers to a holistic and integrated educational system is considered as the objective of the activity of the system and the installation of the trend of modern education based on the development of technical qonuniyat. The implementation of this principle is the improvement of the educational process in accordance with the requirements of the society, the improvement further include a goal muvoviq organization. This principle of the education process as a system of educational and cognitive activity at any time of the readers and allows you to design, as well as its performance and growth and development. The general algorithm, technological schemes to establish the exact adjustment of the requirements of the state educational standard rasional directed activities, including the principle of complete innovative education, modern educational technology has focused primarily on conventional education, without which kept the positive side of this process of modernization of the highest values that reflect the organization of innovative processes as rational, he does not deny, but that implies.

The principle of approach is very important because all the optimallik tadqiqotchilik kompetentsiyasini form their readers to find the most reasonable and acceptable methods of addressing the research problem is the main thing tutorial. When I say optimal, we solve the research problem the choice of the conditions of experience that enables us to more effectively we will keep referring to.

The main principles of the application of these principles to the formation of tadqiqotchilik kompetentsiyasini them should be as follows: exams which based methods and can be done through the introduction of:

- his education on the basis of the content on the following aspects of the principle of a rational combination of the components that change the content of education: mechanical engineering and material aspect kiradigapn the concept of the basic law; the ideal aspect - great topics and sections; containing practical work according to the above aspect to produce prosessual-faoliyatli aspects; education of the content of the separated components feelings and emotions that arise as a result of a review of the relationship of motivation and qadriyatli aspects;

- readers requires a level of research that needs special preparation of the development of the principle of education to achieve specific goals without them I can't. The development of the principle of educational research needs new, exclusive training needs ensures the formation of some subjects to put their education after gaining only goal will determine.

On this principle the implementation of science programs are not only relevant, but also practical lessons, revision and improvement of manuals require special.

of special importance in modern vocational education, but because of the lack of special methods of teaching, often oshirilmayotgan out to mean principle.

Our case, this principle means if a student is directed to the parameters of the educational process of conscious, they usually are determined by the teacher. In this case the results of independent research for students not only the selection of

the trajectory, but also their own education-research and scientific-research activities are effective and conscious organization is also important.

Engineering bachelor in the direction of the formation process and the complexity of many facets tadqiqotchilik kompetentsiyasini availability requires the development of new methods of teaching. This method in the planning of future work plan and this is one of the mechanisms of its implementation when it appears the need to clearly structured, research or teaching-research work of projecting the pattern used method.

Rasional-systematic theoretical and experimental analysis of this method in order to achieve the goal of the logical sequence of steps allows the user to determine.

The main goal of the method involves identifying patternning, and then depending on the stage of the work, in turn, how much lower that reaches the target consists of the function. The main purpose, the lower the target features and the criteria for the implementation of the priority for them and this work should show koeffisienti separated.

This research work will help in the implementation of a method group brainstorming fulfilled, teaches the ability to listen and to hear, a clear set of goals and sub goals – this is good training in the level of knowledge.

The method of approach used in the second method of pattern rasional - prepared materials were protected from the device for analysis of certain structures and the main focus is engineering laboratory use.

Spatial templates for students to understand the logic of the experimental set-oriented, modular, it helps to think of this distribution allows a reasonable time while in the laboratory.

In the formation of research competence, we focus, first of all, on improving the principles of choosing the optimal composition of the lesson, drawing it up according to the content of laboratory and practical training, in accordance with the curriculum and approved programs. It is also necessary to determine the possibilities of further mastering some sections of the course, taking into account the performance of work in the research laboratory. Some aspects of the introduction of both new and traditional pedagogical technologies, as well as the issues of careful and rational use of all the possibilities of various means and methods of teaching, are also important. In this case, the introduction of modern pedagogical approaches to the organization of the work of laboratory practice makes it possible to more efficiently and purposefully implement the process of formation of research competence.

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