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ASPECTS OF IMPROVING THE EDUCATION SYSTEM IN TECHNOLOGICAL UNIVERSITIES

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The modernization program is a qualitatively new approach to the education system in Uzbekistan. It provides not just for the transfer to students of a certain amount of knowledge, the theory of an object, but for the inculcation of skills and experience of practical activities in a market economy and the formation of their creative and research abilities during the period of study in a secondary school and in a higher educational institution, that is a change in the educational paradigm is planned.

The scientific basis for its development was, first of all, a thorough analysis and transformation of both domestic and foreign experience in the development of the education system, in which the trends in personnel training by stages of development are largely similar, namely: in-production, non-industrial, alternative and step-by-step programs.

Each of these programs characterizes the corresponding stage of development of society and has a number of features. Thus, the in-house program, based on strengthening professional training with a minimum of time allocated for



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theoretical training, did not achieve the desired results - a significant part of the graduates suffered from functional illiteracy. The non-production program that replaced it, designed to strengthen theoretical training and practical development in production, produced personnel of some “semi-finished products”, essentially having neither experience nor skills in production activities. The only exceptions were those “lucky ones” who were able to undergo practical training during their studies and work after graduation at enterprises, organizations or institutions with a relatively high production culture.

Thus, it is being replaced by an alternative program, according to which approximately equal amounts of time are allocated for theoretical training and practical training, trying to solve the problem by synthesizing the advantages of in- and out-of-production forms, while eliminating their shortcomings. However, the implementation of state policy in the field of modernization of higher education is not carried out on the basis of using a scientifically based concept of a systems approach and in the absence of developed specific mechanisms for achieving the goals and objectives of the problem.

In some European countries, when training personnel under an alternative program, a rapidly developing form of training, as close as possible to the requirements of production, is training based on contact connections between enterprises and educational institutions [1, 2, 3 and 6]. In Uzbekistan, this system began to be implemented during the perestroika period, and therefore it was designed for continuous practical training of personnel in scientific and production formations created at universities and managed by the students themselves. In those universities where they have not managed to create student research and production units, the quality of personnel training remains low, since



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students, as a rule, undergo practical training in small firms with outdated equipment and imperfect technology. In addition, for well-known reasons, there is a sharp shortage of professionally trained teaching staff in the country with extensive experience in the higher education system and professionalism in expert activities, which inevitably led to a decrease in the quality of training of specialists, especially in non-state universities. As a result, there has been a devaluation of higher education diplomas with the ensuing negative consequences - a significant part of graduates are employed outside their specialty, which indicates the ineffectiveness of the system of higher professional education in an alternative training program.

One of the main reasons for this outcome was the discrepancy between the new requirements for a specialist and the system of his training in higher educational institutions. In this regard, the development of a rational model for organizing vocational education is an urgent problem.

In recent years, in a number of countries, a stepped program has become increasingly widespread, which begins training immediately after the end of primary education, from grades 5–6. The developed program for the modernization of Russian education has absorbed all the positive domestic and foreign experiences of alternative and step-by-step programs, but with a focus on a competency-based approach and with a special emphasis on the development of creative and research abilities, as well as on the self-development and self-education of students in the system of higher professional education.

However, the implementation of a program to improve education requires the immediate resolution of a number of urgent organizational issues, among which the most important are the following. Firstly, all educational institutions must



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build their relationships in a new way in the direction of developing the creative and research abilities of students not only during their studies at the university, but also in secondary schools. The success of educational institutions in preparing creatively thinking individuals largely depends on the targeted linking of all taught curriculum disciplines with the solution of the task at hand and on the staff of university teachers and school teachers who are able to develop the inclinations of students and help them acquire useful skills.

Proper education and upbringing in the family are also of great importance for the development of creative abilities. Therefore, taking into account the varying degrees of intensity of the inherent inclinations of a researcher, the task of educational institutions, together with parent committees, is to develop them to the level necessary for fruitful production activities. At the same time, taking into account the costs of family education at the stage of organizing work on the development of creative abilities, i.e. from grades 5–6, to provide training according to individual programs of varying complexity, content and duration in order to successfully complete the main task - to develop in them creative, searching, research approaches to understanding the world around us, phenomena - while “... the function of the school is not is to provide special experience, but to develop consistent methodological thinking” [5].

In solving this far from simple task, a special place is given to higher education institutions. The success of a university in preparing a creatively thinking individual largely depends not only on the targeted linking of all taught disciplines of the curriculum with the solution of the task, but also on the scientifically based choice of specific educational technologies that take into



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account the specifics of the academic course or academic discipline and include the integrated use of modern forms, methods and means of teaching.

At the same time, in the process of determining the methodological concept of organizing and conducting training sessions, we proceed from the need to adhere to the following basic requirements:

- the study of curriculum disciplines should be aimed at solving specific production problems through the widespread use of problem-based and research teaching methods, ensuring the formation of general cultural, professional and research competencies;
- high effectiveness of practical (including seminars and laboratory) classes and independent work can be ensured only with a high level of student motivation in educational activities;
- in the process of conducting seminars and practical classes, it is necessary to achieve the organic unity of theoretical and research knowledge, ensuring the formation of professional culture and thinking, and self-education skills.

The formation and development of research competence is a complex technological process of training highly qualified personnel, and its implementation in accordance with the requirements of the Federal State Educational Standard for Higher Professional Education should be carried out in stages - depending on the level of development of creative abilities, the forms and methods of working with students differ. Thus, for junior students, the training program provides for a cognitive and practical orientation, and for senior students, the program provides intensive development of creative abilities using problem-based and research-based learning methods, including through their participation in real research work of the graduating department. The same



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principle is used to organize the educational process in all disciplines of the curriculum, especially in the discipline “Fundamentals of Scientific Research”. Thus, when studying any academic discipline, it is necessary to ensure the organic unity of the educational and scientific processes and, on its basis, carry out mass training in scientific research and ensure the quality of development of research competence among future specialists. At the same time, the main document organizing the educational process is the educational and methodological complex of the discipline, in which the student is presented with a complete set of educational and methodological materials for independent study of all disciplines of the curriculum in such a way as to rationally use the time allotted for independent work and organization of scientific research . This is one of the distinctive features of the methodology of teaching research from the methodology of teaching the subject in the traditional concept.

In addition, the educational process is considered as a process of meeting the needs of young people for higher education, i.e. as a process of active, purposeful activity of students, and the students themselves - as an active beginning of the educational process, as its participants, and not as an object of influence from the outside, whose duty previously was to absorb the knowledge being presented.

However, the formation and development of research competence cannot fully solve the problem of professional development of a specialist. Professional competence is formed in practical classes conducted directly in production enterprises, as well as with the direct participation of students in production activities. This fact needs no comment. If there is no opportunity during the training period to acquire professional skills, the young specialist will be unable to perform practical work.



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Unfortunately, the previous relationships between universities, on the one hand, and enterprises and organizations, on the other, in the new economic conditions were completely disrupted and transferred to a commercial basis. Different opinions are expressed about a way out of the current situation: by creating a scientific-production-educational association (RPEO) or by creating a scientific-production center (or detachment) at a university specializing in training specialists with student self-government [4].

To create a IVET, appropriate legal support is needed to regulate mutually acceptable relationships between enterprises representing business interests and universities designed to provide high-quality training in accordance with modern requirements. Obviously, the problem of combining manufacturing enterprises with educational institutions is currently not feasible, since enterprises (especially in small towns) are now concerned about survival. In this regard, it seems preferable to establish business relationships between enterprises and graduating departments on the basis of mutual interests: solving individual production problems with the participation of students, on the one hand, and their continuous practical training, on the other.

The implementation of the proposed approaches to the training of specialists will significantly improve their quality, improve the microclimate in the student environment by deepening vertical connections between student courses, and intensify the participation of students, graduate students and teaching staff in the processes of student learning and scientific and practical activities. In addition, and no less important, the new approach to the practical training of students will ensure a more active participation of the university in solving the economic problems of the region and active interaction with representatives of business and



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education, and will also form an image of the university among entrepreneurs and education as an institution capable of providing real support business and practically solve the problem of improving the quality of training of specialists in accordance with consumer demands.

In our opinion, only such an approach to the education system using quantitative accounting based on score-rating control of knowledge can count on the integration of domestic non-state higher education into the European educational space.

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