

# Untraditional Organization Of The Educational Process shapes Improving The Quality Of Training Of Specialists Through Implementation

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**Abstract:** *Based on the analysis of the traditional system of training specialists, the authors used the “5+1” model to organize the educational process. The essence of this model is that starting from the 2nd year, during 5 days of the academic week, students, in addition to receiving theoretical and practical knowledge at the university, undergo 1 day of practical training at a production enterprise, that is, at the enterprise where they will work in the future. As a result of applying the new model, 90% of students' academic performance improved compared to the results of the previous session.*

**Keywords:** higher education institution, educational process “5+1” model, mutual integration, professional adaptation, professional training, mastery indicators.

**Introduction.** In order to radically improve the content of training highly qualified competitive personnel in the higher education system of the republic by further expanding the participation of sectors and industries of the economy in improving the quality of training specialists with higher education, based on the prospects for the country's socio-economic development, the needs of society, and modern achievements in science, culture, technology and engineering, the President of the Republic of Uzbekistan, dated April 20, 2017, No. PQ-2909 “On measures to further develop the higher education system” and “On measures to further expand the participation of sectors and industries of the economy in improving the quality of training specialists with higher education” 2017 Resolutions No. PQ-3151 dated July 27 was rejected [1, 2].

The conclusions, based on the results of the analysis of a comprehensive study of the education system of the Republic of Uzbekistan conducted in January-June 2017 by a group of influential foreign experts, involved in cooperation with the United Nations Educational, Scientific and Cultural Organization (UNESCO) and a consulting organization (DGP Research & Consulting), noted the following shortcomings: the integrity of theory and practice is not ensured in the higher education process; the ineffective organization of students' internships in production enterprises; as a result, most graduates, instead of becoming ready-made specialists, are re-learning their profession and specialty after getting a job; as well as the fact that the mechanism for monitoring the quality of education does not meet modern requirements; there is a shortage of qualified pedagogical and administrative personnel in educational institutions; and effective cooperation with foreign educational institutions has not been established. In addition, the participation of economic sectors in the process of forming future orders for personnel training, developing qualification requirements for graduates, and ensuring the quality of training of specialists needed by the industry does not meet the requirements. Employers are not systematically working to ensure that higher education programs are in line with the changing labor market requirements.

There are gaps between higher education, science, and production, and integration is not ensured.

The reasons listed above lead to a significant gap between the requirements of modern production and the quality of training of specialists for this production.

In modern conditions, it is practically impossible to train a qualified specialist solely through the power of higher education institutions. Higher education institutions can only form a professional orientation and skills in a graduate. A graduate becomes a real specialist only when he is engaged in practice.

The main disadvantage of traditional forms of organizing the educational process is that the training is aimed at providing students with specific knowledge, rather than practical and professional skills. The university style is often based on the method of transferring knowledge from the teacher to the student, that is, knowledge is transmitted. Lectures reflect the passive nature of teaching. Listening and reading do not increase the experience of independent thinking of students. Special studies show that after an informative lecture, students remember less than 30 percent of the material, and even worse, during the first week after the lecture, this information is forgotten [3].

**The main part.** Based on a systematic analysis of the pedagogical process, the following unresolved problems and tasks of national education were identified: there is multidisciplinary and sub-subjective content in curricula at all levels of the education system; classroom activities are informational in nature and do not contribute to a deep understanding of the content of the topics being studied; didactic and methodological support of the educational process at all levels of education is characterized by a reproductive orientation, which does not contribute to the formation and development of students' creative abilities. Planning independent work in the curriculum is formal in nature. This type of work in most cases does not have individual didactic support;

educational tasks are not given individually, which leads to mass copying when completing these tasks. This situation creates conditions for learning knowledge not for the sake of depth, but for formality; the existing system of assessing the quality of knowledge is characterized by a high level of subjectivity of teachers, since this system is characterized by a low level of differentiation.

These problems can be largely solved by transferring the specialist training system to creative teaching technology, which is based on problem-based lectures, creative seminars, and practice-oriented practical training.

In order to find a solution to the above problem, the scientific works of leading specialists in this area were studied [5,6,7,8,9,10,11,12]. According to the results of the analysis, in 2018, after consultation with the leading enterprises of the region, the Head of the Andijan Regional Emergency Management Department and the Rector of the Andijan Machine-Building Institute approved the "Regulation on conducting training and practical exercises based on the "5 + 1" model" (Figure 1).

According to it, the authors proposed a completely new teaching method ("5 + 1 model") based on the mutual integration of higher education and enterprises in the training of specialists.



Figure 1. Model of the "5+1" program.

This training model is designed to train specialist personnel in a globally recognized field of expertise (dual system). This method of training is recognized worldwide as a form of training for specialists, which provides for the combination of training in an educational institution with a period of work in production and is mainly aimed at training employees with secondary specialized education, while the proposed training ("5+1" model) model—This is a system of pedagogical techniques, organizational forms, methods and means of their implementation in professional training conditions based on the mutual cooperation of a higher educational institution and an enterprise. (Figure 2).

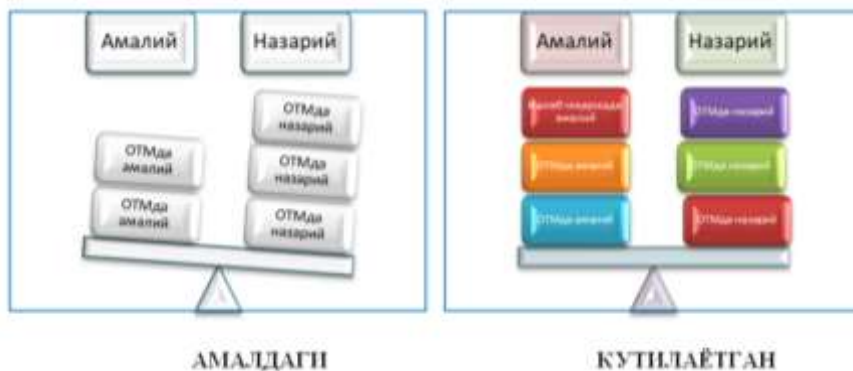


Figure 2. Comparison of current and expected knowledge.

The main principle of this training model is that it places equal responsibility on the higher education institution and the enterprise in the process of training quality specialists. (Figure 3).



Figure 3. Model program.

The interest of the enterprise is, first of all, the opportunity to reduce the costs of searching for and selecting, training, retraining and adapting specialist personnel, and to train the necessary specialists. In this case, the employer actively participates in the formation of professional knowledge of specialists, the adaptation of graduates to the working conditions of the enterprise, and the formation of mentoring systems. In turn, students not only get acquainted with specific production conditions and master the basics of professional activity, but also have the opportunity to get a job in their specialty after graduation (Figure 4).



Figure 4. Expected result from implementing the model.

It should be noted that the essence of this model is to supplement the educational process with practice, that is, a certain part of the educational process is carried out on an enterprise basis. The project method of teaching is introduced into the educational process. Leading specialists from enterprises and organizations are involved in the process of assessing student knowledge, preparing course projects, conducting diploma theses on the orders of enterprises, joint holding of science Olympiads, establishing prestigious scholarships, and issuing relevant qualification certificates.

**Results.** The essence of this model is that, in addition to the theoretical and practical knowledge that students receive during the 5 days of the academic week at the university, they also undergo 1 day of practical training at a manufacturing enterprise, that is, at a place where they can find employment in the future.

According to the scheme presented in Figures 1 and 5, students of the "Life Safety" educational direction will go to the relevant enterprises every Wednesday of the week in groups, in accordance with the developed lesson schedule (working in small groups of 6-8 people increases the opportunity to work individually with students, and does not pose a problem for enterprises) (Figure 5).



Figure 5. Scheme of implementation of the “5+1” model.

The practical classes to be conducted in groups across disciplines were determined in advance according to the subject program. Accordingly, the relevant subject teachers visited the enterprises and studied the topics to be covered in the program and the necessary equipment.

Based on the Regulation on the implementation of the “5+1” model, an agreement was signed to organize the educational process at enterprises, which provide students with a separate classroom and all the equipment related to the subject. In addition to the professor-teacher assigned from the institute to conduct the course with students, industry specialists from the enterprise were also involved in the educational process.

One of the achievements of this educational program is that during the educational process, the student consolidates the theoretical knowledge acquired at the institute with the practical skills acquired at the production enterprise.

To assess the students' knowledge, current control was carried out by the practice leader at the end of each cycle at the production base. Intermediate control was carried out at the university based on the approved curriculum schedule by the teacher. Final control was carried out with the participation of a commission consisting of teachers and specialists.

The analysis of students' opinions and the results obtained showed that, due to the fact that they performed practical exercises with their own hands using the necessary equipment, the students understood the essence of the subject better, this practice was useful for them, and such practice was very necessary. The results of the study showed that, when comparing the first and second semesters of the 2018-2019 academic year, the average student mastery of subjects increased by 39-41% across groups (Figure 6).



Figure 6. Results of training of students in the "Life Safety" major based on the traditional and "5+1" model.

**Conclusions.** TakenBased on the results of the research, the following conclusions can be drawn:

- The application of research results in the educational process ensures a differentiated (individual) approach to each future specialist, resulting in the preparation of personnel that meets the needs of personnel consumers;
- “5+1”Conducting practical training at enterprises based on the model allows students to better adapt to their future profession;

-“5+1” The interest of the enterprise in organizing the training process based on the model is, first of all, to reduce the costs of searching for and selecting, training, retraining and professional adaptation of specialist personnel, and to create the opportunity to train high-quality specialist personnel;

-Applying the "5+1" model to the educational process ensures the successful mastery of subjects by students and teaches them to constantly and objectively monitor themselves.

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