

TECHNOLOGY OF USING INNOVATIVE PLATFORMS IN EDUCATION OF TECHNICAL SCIENCES

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<https://doi.org/10.5281/zenodo.10695141>

Abstract. *This article describes the technology of using innovative platforms in the teaching of technical sciences, the existing problems and shortcomings in the organization of distance education, their elimination, and the issues of training competitive personnel.*

Keywords: *education, international standards, classifier, distance education, electronic platforms, scientific potential.*

In order to ensure the stable and rapid development of the republic's economy, comprehensive, rationally based priority tasks and directions, plans and programs of socio-economic development are being developed for the future. The new market relations that are being formed in our country and deepening in many aspects have an impact on the continuous education system, including the activities of professional educational institutions that serve to increase the number and potential of talented, enterprising highly qualified personnel. In the period of modernization and diversification of the economy of Uzbekistan, to increase the income of citizens, the standard of living and the volume of the gross domestic product produced in the republic, as a result, to strengthen the independence of our country, to improve the well-being of our people, to create new jobs to ensure the employment of the population, together with the improvement of working conditions the tasks of increasing the intellectual potential of labor resources are among the most important issues of today.

In the current conditions of globalization and rapid information exchange, the development of any organization, enterprise and institution in accordance with the requirements of the times is a broad outlook and responsibility of employees, and most importantly, the knowledge, skills, talent, morale, and management ability of highly qualified personnel in the leadership and team, is directly related to scientific potential and other characteristics. The training of competitive, highly qualified personnel in professional educational institutions, their purposeful use for the peace and prosperity of our country, and the well-being of our people is one of the main requirements of a market economy based on strict competition. Because in the positive solution of the above-mentioned global issues, the great scientific, creative, intellectual and labor potential of our country is a component, who graduated from professional educational institutions from the years of independence until now, has been working effectively in organizations following the requirements of the market economy in the labor market the role of highly qualified personnel is important. In recent years, large-scale work has been carried out in our country to create a professional education system that meets the priority directions of socio-economic development and the requirements of international standards. In particular, in connection with the

implementation of the Decree of the President of the Republic of Uzbekistan No. PF-5812 dated September 6, 2019, the activity of vocational colleges in the Republic was terminated, which corresponded to international standards, that is, the UNESCO international classifier (hereinafter the International Classifier or MSKO) A professional education system corresponding to 3, 4, 5 levels were introduced. Here, we can see vocational schools corresponding to level 3 of the international classification, departmental colleges corresponding to level 4, and technical schools integrated with the higher education system corresponding to level 5. The establishment of new professional educational institutions in the regions, the opening of modern educational directions and specialties of personnel training, correspondence and evening departments, and the increase of admission quotas to professional educational institutions are important reforms in this direction. In today's conditions, the educational process in professional educational institutions is carried out on the basis of the established educational regulations, and the educational programs in the subjects are integrated in collaboration with the socio-economic development programs of the region and the needs of the production industries. is being developed. What are the problems and shortcomings of the professional education system that conforms to international standards? It is natural that questions arise. In answering these questions, we can explain the problems and solutions as follows.

First, in the coming years, infectious diseases that have a negative impact on human health all over the world, including viruses such as the coronavirus infection, preventive measures such as compliance with the rules of hygiene among the population, maintaining social distance, and the educational process in educational institutions. there was a need to move from the traditional form to distance education. In the higher education system, distance education was organized on the basis of the MOODLE software education platform in most higher education institutions. However, at the same time, due to the lack of "Smart Education" platforms for distance learning in the professional education system, training sessions were conducted through social networks and various messengers. This, in turn, leads to a decrease in the quality of education, problems in the control system, students not attending training sessions on time, problems in the Internet network in the regions, due to the fact that the bit size of the training materials is different due to difficulties in use and excessive Internet traffic consumption by pedagogic staff and students, it caused an increase in costs and as a result, problems that negatively affect the continuity of education, such as the absence of some students from classes. As an example, it should be noted that in 2020, only 17% of students and their parents responded positively to the survey on the effectiveness of the "online class" organized at the Sirgali Polytechnic Vocational College in 2020 due to the pandemic. expressed an opinion, 83 percent of survey participants thought that the quality of knowledge has decreased. However, for many years, this educational institution has taken the leading positions in the city of Tashkent and the Republic in terms of the quality and rating of education. Secondly, in the newly established professional education system, there are different forms of daytime, evening and part-time education than the previous professional education system, and even in the absence of pandemic conditions, the educational load of students in the form of part-time education is different. significantly different from the forms of education, it is observed that the quality of education decreases, the students have relatively little knowledge and skills. In order to eliminate such shortcomings, it is advisable for the students of part-time education to learn remotely based on the "optional lesson schedule".

Thirdly, in accordance with the Law of the Republic of Uzbekistan "On Education", in order to create wide opportunities to support the interest of young people in acquiring professions and specialties and to organize dual education in the professional education system. Resolution No. 163 of the Cabinet of Ministers of the Republic of Uzbekistan dated March 29, 2021 was adopted. In accordance with this decision, starting from the 2021/2022 academic year, the "dual" education system will be introduced in the professional education system based on the "lifelong education" principle, and students will study at least 2 days a week. During the working days, those who have received education in the institution can strengthen their practical skills in enterprises or production sectors, respectively, and it is envisaged that enterprises and organizations will pay wages to the learners. This, in turn, increases the interest of young people in acquiring professions and specialties. However, the knowledge and skills acquired during 2 days of theoretical or practical training during the week may have a negative impact on the minimum requirements for knowledge and skills that should be acquired by young people. Therefore, it is appropriate for young people who are receiving education under the "dual" education system to receive "mixed" education based on the 2-day traditional education and 4-day distance education system. After all, the acquisition of knowledge is limitless, and there is no doubt that the young generation's effective acquisition of knowledge in a short period of time and, in turn, ensuring integration with production industries will have a positive effect on the development of the country.

Today, a number of activities are being carried out to effectively establish the professional education system. In particular, for the 2020/2021 academic year, the Ministry of Higher and Secondary Special Education's koljek.edu.uz for departmental colleges and teknikum.edu for receiving and registering documents of applicants to the Republic's colleges and technical schools online electronic platform was launched. In 2021, students of professional educational institutions and the Ministry of Employment and Labor Relations of the Republic of Uzbekistan, in cooperation with the Ministry of Employment and Labor Relations of the Republic of Uzbekistan, will create a unified registration system for participants of free vocational training courses for unemployed citizens organized in professional educational institutions prof-talim.edu.uz electronic platforms were launched in order to establish.

In order to eliminate some of the above-mentioned problems and shortcomings, it is appropriate to create "Smart Education" electronic platforms in each educational institution, and to the created innovative educational electronic platforms, each educational direction in the educational institution the existing educational process should be reflected on the electronic platform. Users of the platform can be divided into three groups:

Learners (pupils, students, listeners) - users who belong to the category of learners, enter the system through the provided login and secret codes and submit a lecture, laboratory work, practical training assignment on the given topic based on the lesson schedule, will be able to use visual materials and send completed control work, independent study and other tasks to the teacher in electronic form. (Fig. 1)

Pedagogical staff (teacher, master of industrial education, guide, etc.) - special login and secret code are provided for pedagogical staff, and users who belong to the category of pedagogical staff can fully organize training sessions in the system and take goes when organizing a training session, he puts all materials on the subject of the lesson into the system, monitors the participation

of learners in the training, checks and evaluates the completed tasks, organizes live video conferences during the training session.

Administrative officer (administrator) - supervises the entire educational process, including full control of the activities of teaching staff and learners, monitoring of learning and the progress of training. Educator provides login and secret codes to staff and students to log in to the system.

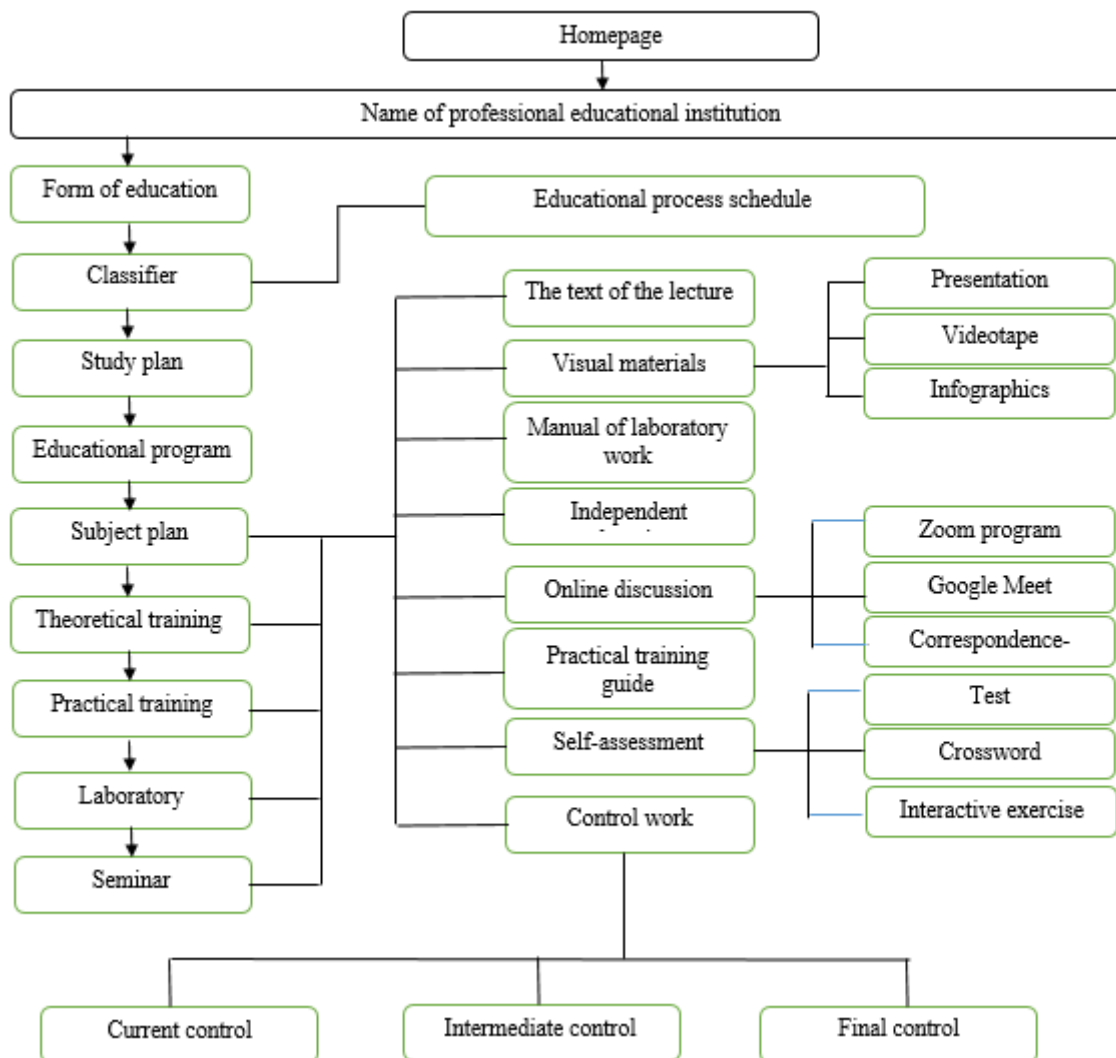


Figure 1: The structure of the platform for the category of knowledge acquirer (user).

It will be difficult to introduce a single platform for all professional educational institutions when creating "Smart Education" electronic platforms for the professional education system, because education in accordance with the Regulation approved by Resolution No. 466 of the Cabinet of Ministers of the Republic of Uzbekistan on August 7, 2020. It is indicated that educational programs are created and approved based on the educational plan for relevant professions and specialties in local institutions, in agreement with partner organizations based on the associations of production associations, the attached higher education institution, and the socio-economic development programs of the region. This, in turn, means that the topics in the approved educational programs of educational institutions may not be compatible with each other. In addition, taking into account the large volume of materials to be placed on the electronic platform for each subject in educational programs, and the simultaneous use of the system by millions of users, the creation of this electronic platform requires a high-quality modern material and technical base. The platform needs to be connected to a server with high RAM and large capacity. As a

solution to such problems, we can show partitioning of the system load. In this case, it is appropriate to create a separate electronic platform for each educational institution and install a separate server, which can be a solution to the problems.

Today, in our Republic, a number of works are being carried out in the personnel training system in the field of information technologies, and as an example, we can show that branches of the Tashkent University of Information Technologies named after Muhammad al-Khorazmi in several regions, and large projects such as "One million programmers" have been established possible. At the same time, in order to create and use innovative electronic platforms in professional educational institutions, in order to continuously improve them, the administrative staff of each institution should be specially trained at the expense of the State budget to create innovative electronic platforms and introduce a system of continuous professional development. pedagogy creates a basis for increasing the knowledge, skills and qualifications of the staff in the field of information technologies and for achieving a new approach to the education of the younger generation in the system.

In conclusion, it should be noted that in today's globalization conditions, personnel training with the help of information technologies occupies an important place. After all, it is inevitable that we widely use information technologies in our daily life, economy, production and all spheres of our life activities.

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