



TECHNOLOGIES FOR PREPARING STUDENTS FOR PROFESSIONAL ACTIVITY IN A DIGITAL EDUCATIONAL ENVIRONMENT

D.N.Mamatov,

DSc. Associate Professor of University of "Yangi Asr"
Tashkent, Uzbekistan

Article history:	Abstract:
<p>Received: February 8th 2023 Accepted: March 7th 2023 Published: March 10th 2023</p>	<p>In the article, the integration of "science-education-production" in the preparation of students for professional activities in the digital educational environment, the technology of preparing students for professional activities in the digital educational environment, production practice as the main form in the process of preparing students for professional activities and the methodology of its implementation are discussed and justified.</p>

Keywords: integration of "science-education-production", professional activities, digital educational environment, production practice, implementation, the technology of preparing students for professional activities

The following can be mentioned as the main problems and measures in the cooperation of OTM-enterprise:

Concentric collaboration: The level of understanding, importance and support of HEIs and business leaders for the integration of production and education directly affects the success of the collaboration. It is necessary to implement project management in cooperation between HEIs and enterprises. The development of higher education and enterprise cooperation requires the need to implement interdisciplinary and interdepartmental cooperation, rational distribution of resources, technical support for the development of enterprises, and the creation of conditions for the integration of theory and practice in various disciplines.

Management Structure: Most HEIs have a pyramid-type management structure. Each department strictly follows its own departmental rules. Departments are relatively independent, and there are barriers to communication and information exchange between them. At the same time, there are interdependencies between departments, so when a problem arises, departments try to pass the blame to each other. Reform of management mechanism is necessary for smooth implementation of HEI-enterprise cooperation. In other words, we need to unite the departments whose tasks are compatible with each other, implement special management in the department, implement information exchange and concentration of rights, and ensure independence.

Time conflict: time conflict between academic studies at HEIs and practice and training in enterprises. It is necessary to find optimal ways of allocating time for theoretical learning and skills according to the needs of individuals. Addressing key challenges includes differences in student levels, attainment levels, and differences in business needs.

Grading Mechanism: Off-campus credits are often not equivalent to on-campus credits. In order to ensure the comprehensive development of students, it is necessary to evaluate not only the theoretical studies and grades of students in HEIs, but also their practical skills and daily work activities in the enterprise. That's why we need to achieve a high moral level of students in enterprises and higher education institutions.

The following main tasks are solved through the use of digital information and training manuals in training at higher education institutions and enterprises: strengthening of theoretical knowledge; establish a connection between theory and practice; control - formation of initial skills and competences in working with measuring devices and conducting simple (simple) experiments. Internships jointly managed by an employee of the enterprise and professors at the Higher Education Institution play an important role in the training of highly qualified specialists, as they provide an opportunity to develop independence in education.

The main phases of software projects are: planning, analysis, design, development, delivery and maintenance. Software Design Methodologies: Waterfall Methodology, Agile Software Development Methodology, Ssrum Methodology, Lean Methodology.

Microsoft Front-Page (HTML-Hyper Text Markup Language), Alliare Home Site (HTML), Microsoft Power Point, Microsoft Word are used in the development of hypertext documents of pedagogical software tools. When creating educational materials related to the main concepts of the subject, it is necessary to use programs that work with raster or vector images. Among them, you can include Corel Draw, Corel Xara, Corel Photo Paint, Adobe Photo Shop, Adobe Illustrator. Special programs such as Disreet 3D Studio MAX, Alais Wave Front, Maya, Light Wave, SoftImage 3D, Adobe Image Ready, Gif Animator, Macromedia Flash, Adobe Premier are used to create educational materials with dynamic illustrations.

Presentation of sound processes and sound editing is done using Sonic Foundry Sound Forge, Wave Lab, Sound Recorder and other programs. Programs such as Microsoft Excel and Microsoft Access are used to create databases.

Selection and preparation of socio-economic, specialty, special training content, which is important in preparing students for professional activity, allows to have a complete idea about professional activity, its tasks and educational-educational issues to be solved, methods of relations. According to the tradition formed in European countries, professional qualification is measured by the competence of a specialist, and the educational system aimed at its formation is measured by the level of knowledge, skills and qualifications.

Competence does not mean the acquisition of separate knowledge and skills by the student, but the mastering of elements of integrative knowledge and practical activity in each independent direction. From the point of view of the requirements for the level of professional training of graduates, competence means the ability of students to use knowledge, skills and methods of activity appropriately in certain situations. Therefore, students should face problems related to real production situations in technical-technological problem-situation assignments. Then they perform mental activity using various methods (analysis, synthesis, comparison, comparison, generalization, etc.) in solving the problem that forms the basis of problem-situational assignments.

In the current credit module system, according to the curriculum, the weekly maximum study load of students is set at 100% of the hours, of which 40% is allocated to classrooms and 60% to independent education. In the process of curriculum changes, a number of issues and problems of subjects are expected to be studied through independent education. The student's independent work is carried out in the auditorium and outside it under the guidance of the teacher or without his participation: Directly in the auditorium - during a lecture, practical training, seminar or laboratory work; in giving direct advice outside of class, in the process of creative communication, in performing individual assignments, etc. In the process of completing educational or creative tasks by students in the information resource center, in their homes, in student houses, in departments.

During the research, science programs, curriculums, digital textbooks, simplified QR-code downloads, multimedia programs, and programs intended for production in enterprises were used in the pedagogical planning of students' educational processes in the context of digital technologies. SolidWorks is the most widely used software product for computer-aided design (CAD) and 3D modeling. The package allows you to create details for future 3D printing. This protects the designer from any errors that inevitably occur in the process of manually drawing product projections. Nx-CAD/CAM/CAE is a system produced by Siemens PLM Software, and the program uses the parasolid geometric modeling core. NX runs on UNIX and operating systems such as Linux, MacOS X, Windows. Plant Simulation is a system and process simulation software designed for optimization, resource loading, logistics and management at all levels of planning, from the production network to individual lines and plots.

In order to develop students' professional competences, practice processes at a production enterprise are important. Its purpose is to strengthen and deepen the knowledge acquired by students in the course of theoretical training, to develop practical skills in the specialty and to form qualifications. Practice is a special human, conscious, goal-oriented, emotional-subjective, material activity. Any practice is described as a totality of objective (prerequisites, means and final result) and subjective (certain activity of a person using intellectual abilities, thinking, knowledge and practical experience) factors. The educational institution provides preliminary theoretical and practical training of students in accordance with the curriculum and science programs in order for students to successfully complete internships at production enterprises.

Structural components of the practical training process: analysis, synthesis, comparison, systematization; understanding, comprehension of connections due to practical exercises and knowledge of laws; formation and systematization of practical skills; activity of independent solution of existing problems in practice; self-control, diagnosis of acquired practical skills; knowing in advance that the result of practical training will be at an ideal level.

Work on the development of students' practical skills during production practice is carried out in production enterprises. Grouping of students in industrial practice according to the goals: cognitive, cognitive and educational goals (strengthening of knowledge gained in the course of theoretical education) and socially oriented goals (communication, interaction in a group or collective cooperation, learning through the experience of information exchange). Based on these goals, it is recommended to select workshops equipped with modern equipment at the production enterprise and organize student internships aimed at developing practical skills. The student qualified production practice was carried out in the following enterprises and organizations: the Ministry of Construction of the Republic of Uzbekistan, regional, city and district construction departments, certain organizations and enterprises of the "Artel Electronics" company: "Quality Electronics", "Next Generation Product", "Prime Electric Engineering". ", certain organizations and enterprises of the MIMAR Group, the state unitary enterprise "Uzshaharzakot LITI" and its regional offices.

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