

FOREIGN EXPERIENCE IN DEVELOPING THE PROFESSIONAL AND PERSONAL SKILLS OF FUTURE ENGINEERS-TECHNOLOGISTS

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Abstract: This article analyzes the best practices of foreign educational systems in developing the professional and personal skills of future engineering technologists. The article considers ways to improve the technical and personal skills of students through innovative teaching methods, practice-based education and international cooperation. Based on foreign experience, the importance of developing professional skills, improving personal and social skills in the training of future engineering technologists is emphasized. It also discusses how these experiences can be implemented in the education system of Uzbekistan, and foreign experience is shown as an important factor in training specialists ready for professional activity.

Keywords: Future engineering technologist, professional skills, personal development, foreign education, innovative methods, practice, international cooperation, professional skills, personal skills, education system.

Аннотация: В данной статье анализируются передовые зарубежные практики по развитию профессиональных и личностных качеств будущих инженеров-технологов. Рассматриваются инновационные методы обучения, практика, основанная на реальной деятельности, а также международное сотрудничество для улучшения технических и личностных навыков студентов. Особое внимание уделяется важности развития профессиональных и социальных навыков в процессе подготовки специалистов. Также в статье рассматриваются пути внедрения зарубежного опыта в систему образования Узбекистана, что способствует подготовке высококвалифицированных специалистов для профессиональной деятельности.

Ключевые слова: Будущие инженеры-технологи, профессиональные качества, личностное развитие, зарубежное образование, инновационные методы, практика, международное сотрудничество, профессиональная квалификация, личностные навыки, образовательная система.

INTRODUCTION

In modern society, the fields of technology and engineering remain key sectors that ensure global economic growth, innovation, and competitiveness. To lead in these areas, not only technical knowledge is required, but also high-level professional and

personal abilities. Students must not only possess deep knowledge in their respective fields but also be prepared to work in teams, think creatively, develop leadership skills, and quickly adapt to new technologies [1, 2]. These factors are crucial for their future professional activities.

Foreign education systems are supporting the application of advanced methods to provide high-quality education and to develop the professional and personal abilities of future engineers-technologists. The effectiveness of the education system depends not only on the theoretical aspects of teaching but also on preparing students for practical work, learning creative approaches, and becoming capable of working on a global scale. Therefore, the experience of foreign education systems not only allows students but also educators to learn and apply innovative approaches [3, 4]. This, in turn, helps future specialists become competitive not only in their fields but also in social and economic terms.

Countries located in various parts of the world are trying to adapt their education systems to changing technological and economic conditions for preparing future engineers-technologists. Abroad, numerous innovative approaches are applied to develop both the professional and personal abilities of future engineers-technologists [5]. These approaches focus not only on developing technical knowledge and skills but also on preparing students for practical work, solving real problems, and succeeding in the international arena.

Additionally, special attention is paid to personal development in the training of future engineers-technologists abroad. Curricula focus on developing personal and social skills, teamwork, leadership, and problem-solving abilities through special training and activities. This method not only prepares students to effectively solve problems during their studies but also in their future professional careers.

Studying foreign experience is crucial for further improvement of national education systems. Uzbekistan can also strengthen its position by adopting the best practices of foreign education systems in preparing future engineers-technologists as highly qualified specialists. This, in turn, serves the technological development of the country and the formation of specialists ready for international cooperation [6].

In this regard, learning from foreign experience in developing the professional and personal abilities of future engineers-technologists significantly helps improve their readiness for practical work. This article analyzes the advanced methods and practices used in foreign education systems for preparing future engineers-technologists. Through this analysis, suggestions on how to implement and develop these practices in the national education system are provided.

In foreign education systems, significant attention is given to project-based learning methodologies for developing the professional and personal abilities of future engineers-technologists. This method ensures that students gain knowledge through practical projects based on real-world problems. For instance, in many universities in the USA and Europe, including prestigious educational institutions such as the Massachusetts Institute of Technology and Stanford University, students work on projects. In project-based learning, students work on practical tasks related to issues they choose, which enhances their creativity, problem-solving, and teamwork abilities. This experience plays a vital role in enhancing the professional capabilities of future engineers-technologists [7].

Practical training and cooperative education: Foreign education systems widely use practices and cooperative education systems to enhance students' professional skills. In this system, students undergo practical training in production or scientific laboratories during their studies. For example, in countries like Canada, Germany, and Japan, students are given the opportunity to work in companies and research centers related to their specialties. This system not only helps students develop practical skills but also creates opportunities for them to build professional networks. During these practical sessions, students learn to work in real-world environments, strengthening their professional qualifications.

Personal development and leadership skills: In foreign education systems, personal development and leadership skills are given considerable importance in the educational process. For future engineers-technologists, developing not only technical knowledge but also personal and social skills is crucial. For instance, prestigious universities such as Harvard University and the University of California, Berkeley, offer special training and seminars to teach students leadership, problem-solving, and self-management skills. In this process, students not only enhance their personal capabilities but also adopt the necessary approaches to succeed on a global scale [8, 9].

Integration of modern technologies in education: The integration of modern technologies in education is a widespread practice in foreign universities. Technologies such as virtual reality (VR), augmented reality (AR), 3D modeling, and simulations provide students with the opportunity to test their skills in practice. For example, at prestigious institutions such as the Technical University of Munich in Germany and the University of Tokyo in Japan, students use virtual reality technologies to create engineering projects. These technologies not only make the educational process more engaging but also bring students closer to real-world working conditions, enhancing their creativity.

Foreign experience also places great emphasis on improving education through international cooperation. Many universities offer students opportunities to study or undergo practical training in other countries. As a result, students gain the chance to learn about other cultures, participate in solving global issues, and acquire new scientific and technological approaches. For example, through the Erasmus+ program, students are provided with extensive opportunities to study and gain practical experience in European Union countries. This, in turn, prepares future engineers-technologists for the global market.

Conclusion: The advanced practices in foreign education systems are extremely important in developing the professional and personal abilities of future engineers-technologists. Project-based learning, practice-oriented education, personal development, the application of modern technologies, and international cooperation are the main directions of foreign experience. By studying and implementing these practices in Uzbekistan, the country can improve the professional qualifications of future engineers-technologists and prepare specialists who are competitive in the global labor market.

LITERATURE

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