



APPLICATION OF NATIONAL AND INTERNATIONAL BEST PRACTICES IN TEACHING CHEMISTRY IN HIGHER EDUCATION

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Abstract

This article highlights the importance of implementing national and international best practices in chemistry education. The opportunities and expected outcomes of the educational transformation process are examined in detail.

Keywords: Best practices, national education, international integration, educational process, innovative methods, quality of education.

Introduction

Man is created in such a way that throughout his life he tries to enrich his knowledge more than he does today, creating some discoveries. Such improvement and development are important for a person to learn other experiences. Therefore, concepts such as integration and transformation are very relevant in the educational process. Because in today's accelerated era, the role of integration in any field is extremely large. Integration in education, in a general sense, means the process of combining different educational systems, methodologies, technologies or other elements of education and creating relationships between them. Educational integration is carried out in order to ensure the comprehensive development of students, as well as to increase the efficiency of the education system. [1].

Educational transformation is the process of improving the education system and adapting it to modern requirements and needs. This process includes many aspects: implementing changes in methodologies, technologies, pedagogy, infrastructure, management and other areas. The main goals of educational transformation.

Improving the quality of education: Providing students with better quality education, using new methods of learning.





Introducing digital educational technologies: Providing online educational platforms, virtual classrooms, and curricula in digital format.

Modernize pedagogy: Update teachers' methodological approaches, use innovative teaching methods. **Ensure equality:** Create equal opportunities for all in the education system, especially increasing access to education in rural areas.

Focus on student development: Ensuring the comprehensive development of students, individual approaches and developmental methods. [2].

International best practices are of great importance in introducing modern technologies into the educational process, expanding interactive teaching methods and deepening students' knowledge. At the same time, it is necessary to develop appropriate approaches based on national experiences and taking into account cultural characteristics. Based on the opportunities created in our country, practice-based approaches are widely used in teaching natural sciences. Students have the opportunity to consolidate their theoretical knowledge in practice through laboratory work, experiments, and field trips. Also, national curricula and textbooks are aimed at harmonizing students' knowledge with national values and cultural characteristics. [3].

International experience plays an important role in the widespread introduction of innovative technologies and modern pedagogical approaches in teaching natural sciences. The education systems of developed countries of the world are growing along with scientific and technological development, and they allow for the exchange of global experiences. For example, in Finland, practical and project-based approaches are widely used in teaching natural sciences. This approach develops students' independent thinking and prepares them to solve real-life problems. [3].

International experiences serve as a source of inspiration for teachers to master new methods and improve the quality of education. At the same time, these advanced approaches, when adapted to national conditions, allow achieving more effective results. Integrating national and international experiences in the process of teaching natural sciences leads to a number of important results. First of all, the level of knowledge of students and their interest in scientific research increases significantly. Lessons based on innovative technologies and international approaches develop students' logical thinking, problem analysis and solution-finding skills.

By introducing international virtual laboratories, students can experience practical exercises in real conditions. This not only improves the quality of the educational process, but also saves material resources. Integration also increases the prestige of the national education system in the international arena. By incorporating





international programs such as STEM into the educational process, students are prepared to actively participate in global scientific projects in the future. Thus, combining national and international experiences in teaching natural sciences will not only improve the quality of education, but also increase the scientific and practical potential of the younger generation. Some problems may arise in the implementation of national and international best practices in the process of teaching natural sciences. One of the main problems is the specificity of the national education system and the difficulties in properly adapting international methods. Since each country has different educational standards, curricula, and resources, direct application of international experiences may not always yield the expected results. Therefore, any international best practices can be implemented by integrating resources and national values. [4].

In higher education today, the assessment of students on a credit-module basis and the increase in independent study hours for their independent learning lead to more work on themselves by the student. This is the basis for the development of creativity and independent thinking in young people. Being able to perform any reactions in chemistry lessons creates the basis for students to consolidate practical knowledge. Such a stable and comprehensive approach to education serves not only to deepen students' knowledge, but also to form their practical skills.

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