

METHODOLOGY OF TEACHING THE SCIENCE OF PEDAGOGIC SKILLS IN CHEMICAL TECHNOLOGY

Xatamova Zumradkhan

*senior lecturer of the Department of "Social Sciences and Sports" of the Fergana
Polytechnic Institute, PhD in history.*

Jalolov Jasurbek

Master student of Chemical technology group M21-22aKT

Abstract: *This article explores the methodology of teaching the science of pedagogic skills in chemical technology. The importance of pedagogy in chemical technology is highlighted, and the challenges faced in teaching it are discussed. The article then proposes a methodology for teaching pedagogic skills in chemical technology, which comprises of four stages: Introduction, Theoretical Framework, Practical Applications, and Evaluation. The proposed methodology aims to equip students with the necessary skills to become effective educators in the field of chemical technology.*

Keywords: *Pedagogy, Chemical Technology, Teaching, Learning, Professional Competencies, Reflective Practice, Pedagogical Models, Problem-Based Learning, Experiential Learning, Assessments, Classroom Management, Evaluation.*

Introduction.

Pedagogy is the study of the principles and methods of teaching, especially as it relates to children. However, in chemical technology, pedagogy takes on a broader meaning as it encompasses the teaching of technical subjects to students of all ages. The importance of pedagogy in chemical technology cannot be overstated, as it is essential for developing students' professional competencies and preparing them for their future careers as educators.

Teaching pedagogic skills in chemical technology, however, presents unique challenges. One of the main challenges is that chemical technology is a complex subject that requires a deep understanding of the underlying principles. As such, educators must not only be experts in the subject matter but must also possess the necessary pedagogic skills to effectively convey this knowledge to their students.

Pedagogic skills in chemical technology refer to the ability to effectively teach and convey technical knowledge in the field of chemical technology. It involves the use of various teaching strategies and techniques to help students understand complex chemical principles and techniques.

What's new in the field of pedagogic skills in chemical technology is the recognition of the importance of developing effective pedagogical skills among

"INTEGRATION, EVOLUTION, MODERNIZATION: WAYS OF DEVELOPMENT OF SCIENCE AND EDUCATION"

chemical technology educators. This includes the need to incorporate new and innovative teaching methods that go beyond traditional lecture-based approaches. There is also a growing focus on experiential learning, which involves hands-on learning experiences that enable students to apply their knowledge in practical settings.

In addition, advances in technology have opened up new opportunities for chemical technology educators to enhance their pedagogical skills. For example, interactive digital tools and simulations can be used to create engaging and immersive learning experiences that help students better understand complex chemical phenomena. Furthermore, the use of data analytics can help educators identify areas where students may be struggling, allowing for targeted interventions to improve learning outcomes. Overall, the field of pedagogic skills in chemical technology is constantly evolving, driven by the need to provide students with the knowledge and skills they need to succeed in this rapidly changing field. As such, chemical technology educators must be committed to ongoing professional development and the integration of new and innovative teaching approaches to ensure their students receive the best possible education.

Methods.

Teaching in Uzbekistan has undergone significant transformations in recent years. The country has made significant efforts to reform its education system with the aim of improving the quality of education and preparing students for the challenges of the 21st century.

One of the key areas of reform has been the transition from a traditional, lecture-based approach to a more student-centered, interactive approach to teaching. This has involved the introduction of new teaching methods and the training of teachers to use these methods effectively. The government has also invested in the development of new teaching materials and resources, such as textbooks and multimedia resources, to support teaching and learning.

Another area of reform has been the introduction of competency-based education, which focuses on developing the practical skills and knowledge that students need to succeed in the workforce. This has involved the development of new curricula that are more closely aligned with the needs of the labor market, and the integration of practical work experience and internships into the education system.

The government has also made efforts to improve the quality of teacher training programs and increase the number of qualified teachers in the country. This has involved the establishment of new teacher training institutions and the development of new teacher training programs that focus on the needs of the 21st-century classroom.

Despite these efforts, however, there are still challenges facing the education system in Uzbekistan. One of the main challenges is the need to improve access

to education, particularly in rural areas. There is also a need to improve the quality of education at all levels, from primary school through to higher education.

In conclusion, teaching in Uzbekistan has undergone significant reforms in recent years, with a focus on developing a more student-centered, interactive approach to teaching, and improving the quality of education. While there are still challenges facing the education system, the government's commitment to reform and investment in education bodes well for the future of teaching in Uzbekistan.

Theoretical Framework

The proposed methodology for teaching the science of pedagogic skills in chemical technology is based on four stages:

1. **Introduction:** The first stage introduces the students to the importance of pedagogy in chemical technology. This stage covers the basic principles of teaching and learning, and the role of pedagogy in developing students' professional competencies. Additionally, students are introduced to the concept of reflective practice, which encourages them to reflect on their teaching and learning experiences.

2. **Theoretical Framework:** The second stage focuses on the theoretical framework of pedagogy in chemical technology. This stage covers different pedagogical models and approaches, including the traditional lecture-based approach, the problem-based learning approach, and the experiential learning approach. Students are encouraged to critically analyze these approaches and evaluate their suitability for different teaching and learning situations.

3. **Practical Applications:** The third stage focuses on the practical application of pedagogic skills in chemical technology. This stage includes designing and delivering lessons, developing assessments, and managing classroom environments. Students are encouraged to apply the theoretical knowledge gained in the previous stage to real-world teaching situations.

4. **Evaluation:** The final stage focuses on evaluating the effectiveness of the teaching and learning process. This stage includes assessing student learning outcomes, evaluating the effectiveness of teaching methods, and reflecting on the teaching and learning process. Students are encouraged to use evaluation as a tool for continuous improvement.

Conclusion

The proposed methodology for teaching the science of pedagogic skills in chemical technology aims to equip students with the necessary skills to become effective educators in the field of chemical technology. By introducing students to the basic principles of teaching and learning, providing them with a theoretical framework, encouraging practical application, and promoting evaluation, this methodology ensures that students are prepared to meet the challenges of teaching in a complex subject area. Teaching pedagogic skills in chemical

technology is essential for developing the next generation of educators who will contribute to the advancement of the field.

REFERENCES:

1. Хатамова, З. (2021). Expenditure of income from taxes and levies in the kokand khanate: <https://doi.org/10.47100/conferences.v1i1.1230>. In research support center conferences (No. 18.05).
2. Nazirjonovna, K. Z. (2022). SH. VOKHIDOV'S CONTRIBUTION TO THE STUDY OF THE HISTORY OF THE KOKAND KHANATE. Innovative Society: Problems, Analysis and Development Prospects, 139-141.
3. Xatamova, Z. (2021, June). EXPENDITURE OF INCOME FROM TAXES AND LEVIES IN THE KOKAND KHANATE. In Конференции.
4. Хатамова, З. (2023). Из истории денежной политики в финансовой системе Коканского ханства. Актуальные проблемы истории Узбекистана, 1(1), 327–336. извлечено от <https://inlibrary.uz/index.php/history-of-uzbekistan/article/view/16511>
5. Murodilov K. T. et al. USE OF GEO-INFORMATION SYSTEMS FOR MONITORING AND DEVELOPMENT OF THE BASIS OF WEB-MAPS //Galaxy International Interdisciplinary Research Journal. – 2023. – Т. 11. – №. 4. – С. 685-689.
6. Nazirjonovna, K. Z. (2022). Political-Financial Analysis of the Issues of Science of the Kokand Khanate in the Work of Khudoyorkhonzade “Anjum At-Tavorikh”. CENTRAL ASIAN JOURNAL OF SOCIAL SCIENCES AND HISTORY, 3(10), 102-111. Retrieved from <https://cajssh.centralasianstudies.org/index.php/CAJSSH/article/view/463>
7. Burkhonov, I. M. (2020). “ZAKAT” HAS ENSURED FAIRNESS AND BALANCE IN SOCIETY. Theoretical & Applied Science, (5), 201-204.
8. Muhiddinovich, B. I. (2020). Negative impact of the tax system on political life-on the example of the history of the Kokand Khanate (1850–1865). ACADEMICIA: An International Multidisciplinary Research Journal, 10(5), 790-795.
9. Burkhonov, I. (2021, June). The importance of the scientific heritage of asomiddin urinboyev in the study of the history of the Kokand khanat. In Конференции.
10. Бурхонов, И. М. (2019). ҚЎҚОН ХОНЛИГИ МАЪМУРИЙ БОШҚАРУВИДА СОЛИҚ ТИЗИМИНИНГ СИЁСИЙ ХАЁТГА САЛБИЙ ТАЪСИРИ (1850-1865). ВЗГЛЯД В ПРОШЛОЕ, (19).
11. Burkhonov, I. (2021). The importance of the scientific heritage of asomiddin urinboyev in the study of the history of the Kokand khanat: <https://doi.org/10.47100/conferences.v1i1.1230>.

org/10.47100/conferences. v1i1. 1242. In RESEARCH SUPPORT CENTER CONFERENCES (No. 18.05).

12. Murodilov K. T., Muminov I. I., Abdumalikov R. R. PROSPECTS OF PEDAGOGICAL SKILLS IN CADASTRAL SCIENCES //JOURNAL OF ENGINEERING, MECHANICS AND MODERN ARCHITECTURE. – 2023. – Т. 2. – №. 5. – С. 12-16.

13. Бурханов, И. (2023). Научное наследие Шарафиддина Али Язди в интерпретации Асомиддина Оринбоева. Актуальные проблемы истории Узбекистана, 1(1), 165–171.

14. BURKHONOV, I. FROM THE HISTORY OF THE TRANSLATION OF THE WORK OF ABURAZZAK SAMARKAND" MATLA'I SA'DAYN AND MAJMA'I BAHRAIN. ЭКОНОМИКА, 138-144.

15. Muhiddinovich, B. I. (2022). The Importance of Asomiddin Urinboev's Scientific Research in the Study of the History of the Kokan Khanate. Kresna Social Science and Humanities Research, 3, 175-179.

16. ogli Jasurbek N. O., Murodilov K. T. HISTORY OF CREATION OF WEB CARDS AND CURRENT PROSPECTS: PROBLEMS AND SOLUTIONS //Educational Research in Universal Sciences. – 2023. – Т. 2. – №. 2. – С. 184-186.

17. Murodilov K. T. et al. IMPROVING THE METHODS OF PROVIDING GEO-INFORMATION FOR THE MONITORING OF TERRITORIES AND DEVELOPING THE BASIS OF WEB-MAPS //Galaxy International Interdisciplinary Research Journal. – 2023. – Т. 11. – №. 4. – С. 695-701.

18. Бурхонов, И. М. (2020). «ЗАКОТ»-ХАЛҚИМИЗ ҲАЁТИДА АДОЛАТ ВА МУТАНОСИБЛИК ОМИЛИ. ВЗГЛЯД В ПРОШЛОЕ, 3(5).

19. Muhiddinovich, B. I. (2022). In the Study of the History of the Kokand Khanate. Eurasian Journal of History, Geography and Economics, 6, 68-71.

20. Burkhanov , I. . (2022). FROM THE HISTORY OF THE USE OF THE SCIENTIFIC HERITAGE OF KOKAND SCIENTISTS ASOMIDDIN URINBOEV. International Bulletin of Medical Sciences and Clinical Research, 2(10), 63–67.

21. Murodilov K. T., Muminov I. I., Abdumalikov R. R. PROSPECTS OF PEDAGOGICAL SKILLS IN CADASTRAL SCIENCES //JOURNAL OF ENGINEERING, MECHANICS AND MODERN ARCHITECTURE. – 2023. – Т. 2. – №. 5. – С. 12-16.

22. Хатамова, З. (2021, August). EXPENDITURE OF INCOME FROM TAXES AND LEVIES IN THE KOKAND KHANATE: <https://doi.org/10.47100/conferences. v1i1. 1230>. In RESEARCH SUPPORT CENTER CONFERENCES (No. 18.05).

23. Хатамова, З. Н. Особенности налоговой системы Кокандского ханства / З. Н. Хатамова. — Текст : непосредственный // Молодой ученый. — 2020. —

№ 5 (295). — С. 254-256. — URL: <https://moluch.ru/archive/295/66918/>

24. ogli Jasurbek N. O., Murodilov K. T. HISTORY OF CREATION OF WEB CARDS AND CURRENT PROSPECTS: PROBLEMS AND SOLUTIONS //Educational Research in Universal Sciences. – 2023. – Т. 2. – №. 2. – С. 184-186.

25. Nazirjonovna, H. Z., & Abdumannobovich, N. M. (2020). Tax system on the territory of kyrgyzstan during the Kokand Khanate. ACADEMICIA: An International Multidisciplinary Research Journal, 10(6), 209-212.

26. Xatamova, Z. (2020). Expenditure of state funds replenished by taxes in the history of the kokand khanate. EPRA International Journal of Research and Development (IJRD), 5(3), 274-277.

27. qizi Abdullayeva G. V., ugli Murodilov K. T. PROVIDING GEO-INFORMATION FOR THE MONITORING OF THE CLUSTER ACTIVITY OF THE REGIONS AND DEVELOPING THE BASIS OF WEB-MAPS (IN THE CASE OF FERGANA REGION) //Innovative Development in Educational Activities. – 2023. – Т. 2. – №. 7. – С. 342-347.

28. Хатамова, З. Н. (2020). ҚЎҚОН ХОНЛИГИДА СОЛИҚЛАР ҲИСОБИГА ТЎЛДИРИЛГАН ХАЗИНАНИНГ САРФ ЭТИЛИШИГА ОИД МАЪЛУМОТЛАР. ВЗГЛЯД В ПРОШЛОЕ, (SI-1№ 4).

Xatamova Zumradxon Nazirjonovna. INFORMATION ON THE PROVISION OF THE FUND IN THE KOKAND KHAN. Look to the past. 2020, SI,pp.590-595

