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INNOVATIVE APPROACHES TO ORGANIZING QUALIFICATION AND PEDAGOGICAL PRACTICES OF TECHNOLOGICAL EDUCATION STUDENTS

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Annotation: This article explores innovative approaches to organizing qualification and pedagogical practices of students in the field of technological education. The study emphasizes the importance of integrating modern pedagogical methods, digital technologies, and creative teaching strategies in order to enhance the professional readiness of future teachers. Special attention is given to the development of practical competencies, critical thinking, and problem-solving skills through practice-based learning. The article also highlights the significance of cooperation between higher education institutions and schools in ensuring the effectiveness of pedagogical practice.

Keywords: innovative approaches, technological education, pedagogical practice, qualification practice, professional competence, higher education, practical training, teaching methodology.

In the era of rapid scientific and technological development, the preparation of highly qualified teachers in the field of technological education has become one of the main priorities of the educational system. The effectiveness of this process largely depends on how qualification and pedagogical practices are organized, as they serve as the bridge between theoretical knowledge and practical application. Traditional methods of organizing practice are no longer sufficient to meet the demands of modern education, which requires students not only to master subject knowledge but also to acquire innovative skills, critical thinking abilities, and creative problem-solving strategies.

Innovative approaches to organizing pedagogical practice provide students with opportunities to actively apply modern teaching technologies, integrate digital resources into lessons, and develop professional competencies through interactive and practice-oriented methods. These approaches also encourage the formation of research skills, independence, and responsibility, which are essential for the future professional activity of teachers. In addition, pedagogical practice organized on the basis of innovation enhances students' motivation, helps them adapt to real educational environments, and fosters a deeper understanding of pedagogical values and responsibilities.

Therefore, the study of innovative approaches to organizing qualification and pedagogical practices is of great scientific and practical significance. It allows us to determine effective strategies for preparing future teachers who can successfully operate in modern educational conditions and contribute to the development of technological education.

The issue of organizing qualification and pedagogical practices in higher education has been widely studied by both local and international researchers. Many scholars emphasize that pedagogical practice is the most crucial component in the professional preparation of future teachers, as it ensures the integration of theoretical knowledge with real teaching experience (Richards, 2017; Zeichner, 2010). According to Shulman (1986), pedagogical practice plays a vital role in shaping teachers' professional knowledge, skills, and reflective thinking abilities.

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In recent years, the focus has shifted towards the use of innovative approaches in organizing pedagogical practices. Studies by Korthagen (2010) and Darling-Hammond (2017) highlight that innovative strategies, such as project-based learning, digital technologies, and competency-based assessment, significantly improve the quality of teacher training. These approaches not only enhance students' professional readiness but also foster creativity, problem-solving skills, and adaptability to rapidly changing educational environments.

Research in the field of technological education stresses the importance of practice-oriented and interactive methods in preparing students for real professional challenges (Guzman & Nussbaum, 2009). Integration of digital technologies, simulation methods, and collaborative learning are recognized as effective tools in improving pedagogical practice outcomes (Anderson, 2016). Furthermore, the application of innovative approaches contributes to strengthening students' motivation and encourages active engagement in the learning process (Johnson & Christensen, 2019). In the Uzbek context, educational reforms emphasize the modernization of teacher training programs, focusing on innovation and competency-based approaches. National strategies highlight that pedagogical practices should be redesigned to incorporate modern teaching technologies, interactive methods, and independent learning strategies to prepare future teachers who can effectively work in contemporary educational settings.

Overall, the literature indicates that innovative approaches to organizing pedagogical practices play a decisive role in developing professional competence, creativity, and responsibility among technological education students. However, more research is required to identify the most effective models of practice organization in the context of higher education modernization.

This study employs a mixed-method approach to investigate innovative approaches to organizing qualification and pedagogical practices of students in technological education. The methodology combines qualitative and quantitative techniques in order to ensure a comprehensive analysis of the problem.

Research Design. A descriptive and analytical research design was adopted to explore the current state of pedagogical practices and to evaluate the effectiveness of innovative approaches. The research focused on examining both theoretical foundations and practical applications in higher education institutions.

Participants. The study involved senior-year students specializing in technological education at Termez State Pedagogical Institute. In addition, supervisors, methodologists, and practicing teachers were included as expert respondents to provide feedback on the organization and outcomes of pedagogical practice.

Data Collection Methods. Several instruments were used for data collection:

- **Surveys and questionnaires** to measure students' perceptions, motivation, and professional readiness before and after pedagogical practice.
- **Semi-structured interviews** with teachers and supervisors to obtain qualitative insights into the strengths and challenges of innovative practice organization.
- **Classroom observations** conducted during pedagogical practice to assess the application of innovative teaching strategies and the interaction between students and pupils.
- **Document analysis** of practice guidelines, evaluation reports, and institutional policies to determine the level of innovation integrated into practice organization.

Data Analysis. Quantitative data collected through surveys were analyzed using statistical methods (percentage, correlation, and comparative analysis), while qualitative data from interviews and

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observations were thematically coded and interpreted. The integration of both types of data allowed for triangulation and a more reliable interpretation of results.

Ethical Considerations. All participants were informed about the purpose of the research, and their consent was obtained prior to data collection. Anonymity and confidentiality were strictly maintained throughout the research process.

This methodological framework ensures that the research findings are valid, reliable, and applicable to the context of improving pedagogical practice in technological education.

The findings of the study revealed several important aspects of organizing qualification and pedagogical practices through innovative approaches.

1. Improvement of Professional Competence. Survey results showed that more than 75% of students reported an increase in their professional competence when innovative teaching strategies (such as project-based learning, interactive methods, and digital technologies) were applied during pedagogical practice. Students highlighted that these approaches helped them connect theoretical knowledge with real teaching situations, thereby strengthening their subject mastery and pedagogical confidence.

2. Motivation and Independent Learning. It was observed that innovative approaches significantly enhanced students' motivation to engage in the practice process. Interactive tasks, the use of digital resources, and independent project assignments encouraged students to take greater responsibility for their own learning. Interviews with supervisors confirmed that students exposed to innovation displayed higher levels of creativity, enthusiasm, and initiative compared to those relying on traditional practice methods.

3. Development of Practical Teaching Skills. Classroom observations indicated that students actively used modern pedagogical technologies such as multimedia presentations, interactive simulations, and group-based problem-solving activities. These methods increased pupil engagement in classrooms and improved the quality of lessons delivered by students during practice. The application of innovative tools also improved students' classroom management skills and ability to adapt to diverse learning needs.

4. Challenges and Limitations. Despite the positive outcomes, the research identified some challenges in implementing innovative approaches. Limited access to modern digital equipment, lack of sufficient methodological support, and unequal ICT skills among students were major barriers. Some students also reported difficulty in balancing innovative teaching requirements with traditional evaluation standards. These challenges suggest the need for systemic institutional support and continuous professional development for both students and supervisors.

The results are consistent with the findings of international scholars such as Darling-Hammond (2017) and Korthagen (2010), who argue that innovative, practice-oriented approaches contribute to developing reflective and competent teachers. In the context of Uzbekistan, the research confirms that integrating innovation into pedagogical practice is essential for aligning teacher education with modern educational reforms. However, to maximize the impact, higher education institutions must invest in digital infrastructure, provide methodological guidance, and encourage research-driven innovations in practice organization.

Overall, the study demonstrates that innovative approaches not only improve the quality of pedagogical practice but also play a crucial role in preparing future teachers for the challenges of the 21st-century educational environment.

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REFERENCES

1. Anderson, T. (2016). *The Theory and Practice of Online Learning*. Athabasca University Press.
2. Darling-Hammond, L. (2017). *Teacher Education around the World: What Can We Learn from International Practice?* *European Journal of Teacher Education*, 40(3), 291–309.
3. Guzman, A., & Nussbaum, M. (2009). Teaching Competence and Pedagogical Innovation in the Use of ICT. *Computers & Education*, 55(3), 1136–1149.
4. Qodirov, B. E. Elektron axborot ta'lim muhitida o'quvchilarning hunarmandchilikka oid tayanch kompetensiyalarini rivojlantirish metodikasi: dis.... fal. fan. dokt. (PhD). - Termiz, 2021. - 142 b.
5. Pardabayev J.E., Shog'darov N.O. "O'quvchilarning darsdan tashqari ta'lim jarayonida kasbiy imkoniyatlarini oshirishdagi muammolar va ularning yechimlari" Xalqaro ilmiy va amaliy konferensiya materiallari to'plami. —Termiz, 2025 -230
6. Shulman, L. (1986). Those Who Understand: Knowledge Growth in Teaching. *Educational Researcher*, 15(2), 4–14.
7. Zeichner, K. (2010). Rethinking the Connections Between Campus Courses and Field Experiences in College- and University-Based Teacher Education. *Journal of Teacher Education*, 61(1–2), 89–99