



## **DEVELOPMENT OF METHODOLOGICAL COMPETENCE OF STUDENTS OF PEDAGOGICAL UNIVERSITIES IN LABOR TRAINING**

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### **Abstract**

This article explores the development of methodological competence among students of pedagogical universities specializing in technology and labor education. It highlights the role of methodological training in shaping future teachers' ability to effectively design, implement, and evaluate instructional processes in skill-based and practical subjects. The study investigates how current pedagogical programs contribute to the acquisition of methodological knowledge and teaching strategies, and identifies the challenges faced in fostering this competence in the context of Uzbekistan's educational system. The research emphasizes the need for a systematic and practice-oriented approach to preparing students for real classroom environments. It also proposes strategic improvements in teacher training curricula, emphasizing reflective teaching, lesson planning, and the integration of modern technologies into methodological instruction.

**Keywords:** Methodological competence, teacher training, labor education, pedagogical universities, teaching methodology, lesson planning, professional development, instructional design.

### **Introduction**

The effectiveness of labor education in general secondary schools greatly depends on the methodological competence of the teacher. Methodological competence refers to a set of skills and knowledge that enable teachers to plan, organize, conduct, and assess educational activities in accordance with pedagogical goals, students' needs, and specific subject requirements. In the context of technology and labor education, this competence becomes especially important due to the practical, hands-on nature of the discipline, which requires not only theoretical understanding but also precise instructional organization and effective classroom management.



In Uzbekistan, ongoing educational reforms emphasize the modernization of teacher training and the introduction of competency-based education models. As pedagogical universities prepare future teachers of technology and labor, the question arises as to how well current programs support the formation of methodological competence. Many students graduate with strong subject knowledge but struggle to translate this into effective teaching practices. This gap between content mastery and methodological readiness leads to a mismatch between educational outcomes and real-world teaching demands.

The need for highly skilled, methodologically trained educators is further intensified by rapid technological change, the growing role of digital tools in education, and increasing expectations for student-centered learning. Future teachers are expected to employ a variety of teaching methods, assess practical skills objectively, design differentiated lessons, and ensure safety during manual and technical work. All these responsibilities require a solid foundation in teaching methodology.

The purpose of this article is to examine the current state of methodological competence development among students in pedagogical universities in Uzbekistan, particularly in the field of labor education. The study seeks to identify both the strengths and limitations of existing training programs and to suggest ways of enhancing the practical and methodological aspects of teacher education.

## **Literature Review**

The concept of methodological competence has received increasing attention in pedagogical research, particularly in the field of vocational and practical education. Scholars define methodological competence as the teacher's ability to effectively select, adapt, and apply teaching methods that are aligned with educational goals, learner characteristics, and contextual factors. According to Zimnyaya (2005), methodological competence includes the capacity to plan lessons, manage classroom processes, and assess learning outcomes, while maintaining pedagogical flexibility.

International studies, including those by Korthagen (2010) and Tardif (2006), emphasize the importance of integrating theory and practice in teacher education. They argue that future teachers should engage in reflective teaching practices, case-based learning, and micro-teaching exercises to build methodological awareness.



In the context of labor and technology education, Rauner (2017) highlights that the methodological preparation of teachers must involve a deep understanding of the structure of manual tasks, safety protocols, and project-based learning environments.

In Uzbekistan, researchers such as Saidova (2020) and Rasulov (2021) have noted that methodological preparation in pedagogical universities still faces numerous obstacles, including limited time for practical coursework, outdated methodological resources, and insufficient use of digital technologies in instruction. Although national educational standards emphasize competence-based training, implementation remains inconsistent. The literature underscores the urgent need for systemic change in how methodological competence is developed among future teachers, with a stronger focus on applied skills and reflective pedagogy.

## **Methodology**

This study employs a qualitative research approach grounded in the analysis of institutional curricula, interviews with teacher educators, and observation of student-teacher practice within pedagogical universities in Uzbekistan. The main objective was to evaluate how methodological competence is developed in teacher training programs related to technology and labor education. Three universities from different regions of Uzbekistan were selected as case sites to ensure a broader understanding of institutional practices and regional variations.

Curriculum documents were analyzed to determine the structure, duration, and content of methodology-related courses. Particular attention was paid to how lesson planning, instructional methods, and assessment strategies are taught and whether practical training is effectively integrated. Semi-structured interviews were conducted with a total of 15 teacher educators who are responsible for methodology and practice supervision. These interviews explored the educators' perceptions of student preparedness, instructional challenges, and suggestions for improvement.

Additionally, classroom observations were conducted during micro-teaching sessions and practice lessons led by students in partner schools. These observations aimed to assess the students' use of pedagogical techniques, lesson organization, clarity of instruction, and ability to manage hands-on tasks in real classroom settings. The collected data were analyzed thematically, identifying recurring



challenges, successful strategies, and gaps between curriculum intent and implementation.

The triangulation of data sources provided a more nuanced understanding of the extent to which methodological competence is embedded in teacher education for labor and technology subjects. The findings informed targeted recommendations aimed at strengthening the methodological component of teacher preparation in line with international best practices.

## **Discussion**

The results of the study indicate that while pedagogical universities in Uzbekistan formally include courses aimed at developing methodological competence, the effectiveness of these courses varies significantly between institutions. One of the primary challenges identified is the insufficient integration of practical experiences into methodological instruction. Many students report that the theoretical content of methodology classes is not directly applicable to real classroom situations, especially when it comes to managing practical labor tasks and ensuring student engagement.

Faculty members acknowledge that although curriculum frameworks encourage student-centered and activity-based teaching methods, traditional lecture-based delivery still dominates. As a result, students often lack confidence when transitioning from university training to school-based practice. Observations during micro-teaching sessions revealed that many students struggle with designing clear instructional objectives, adapting tasks to different skill levels, and managing time effectively during hands-on lessons. These difficulties point to gaps in their methodological readiness.

Another notable issue is the lack of exposure to contemporary teaching aids and digital technologies. Despite policy initiatives promoting digitalization in education, many methodological courses have yet to integrate tools such as interactive simulations, video-based instruction, or digital lesson planning platforms. This leaves future teachers underprepared for working in technologically enhanced classroom environments. Moreover, access to updated workshop facilities and resources remains limited, further constraining students' ability to apply theoretical concepts in practice.



However, there are also positive examples. In several universities, educators have introduced collaborative lesson planning projects, peer teaching exercises, and case study discussions. These activities foster reflective thinking and allow students to internalize methodological principles through active participation. Similarly, partnerships with local schools that involve guided teaching practice have proven to be an effective strategy in strengthening students' practical and methodological skills.

The analysis suggests that improving methodological competence requires not only enhancing curriculum content but also transforming pedagogical approaches within universities. Educators themselves need targeted training on innovative teaching methods, digital tools, and competency-based assessment strategies. Continuous feedback, critical reflection, and structured mentorship during internships are equally essential to reinforce methodological skills.

Overall, a shift towards experiential and inquiry-based learning models in teacher education can significantly improve methodological preparation. The findings underscore the importance of aligning training content with the realities of modern labor education and ensuring that students acquire the capacity to design effective, safe, and motivating learning environments.

### **Main Part**

Methodological competence is a cornerstone of effective teaching, particularly in labor and technology education, where instructional tasks involve not only delivering theoretical knowledge but also guiding students through practical, often complex, manual and technical processes. In the pedagogical context of Uzbekistan, the formation of this competence among university students is shaped by several interrelated components: theoretical preparation, practical training, supervision, access to resources, and the pedagogical culture within the institution. Theoretical preparation usually begins with introductory courses on general pedagogy and didactics, followed by specialized courses in teaching methodology specific to labor education. These include modules on lesson structure, instructional methods, safety in the classroom, and managing differentiated instruction. However, analysis of university syllabi reveals that these courses are often overloaded with content and insufficiently contextualized to reflect the demands of actual classroom practice. Students are taught frameworks and



concepts but lack opportunities to test and adapt them in authentic learning scenarios.

Practical training is the most direct method of developing methodological skills. This is implemented through teaching internships and micro-teaching sessions where students plan, deliver, and reflect on their own lessons. Nevertheless, many students face constraints during these experiences. Limited time for school practice, lack of systematic feedback, and minimal exposure to varied student populations all hinder deep methodological development. Moreover, the quality of mentorship during internships is inconsistent, with some schools offering supportive environments while others treat student teachers as passive observers rather than active participants.

A critical issue affecting the development of methodological competence is the availability of modern instructional resources. Outdated equipment in university workshops and schools limits the scope of possible activities. Without access to contemporary tools, such as computer-aided design software or modern measuring instruments, students cannot learn to integrate real-world technologies into their teaching. Furthermore, while national educational policy encourages digitalization, in practice, many methodological courses do not include training in digital pedagogy, online lesson planning tools, or hybrid teaching models.

In contrast, there are some innovative practices emerging within the teacher education system. Project-based learning, where students collaboratively develop and present full teaching modules, has shown positive results in increasing methodological awareness. Peer observation and structured reflection exercises also help students internalize good teaching practices. In a few universities, departments have begun to integrate simulated teaching environments where students can experiment with different methods in a risk-free setting. These efforts, while limited in scope, demonstrate the potential for more immersive and dynamic approaches to methodology training.

To build a sustainable system for methodological competence development, universities must adopt a more experiential, skills-based training model. This includes increasing the number and duration of internships, introducing mentorship programs with clear guidelines, and embedding reflective practice into every stage of training. Educators within universities need ongoing professional development to align their instruction with contemporary needs and technological advances.



Inter-institutional collaboration and partnerships with industry can also help keep methodological instruction relevant and up to date.

Ultimately, the goal is to prepare future labor and technology teachers who are capable of making informed instructional decisions, adapting methods to varied learning contexts, and fostering active, safe, and meaningful participation among students. This requires not only strong theoretical knowledge but also well-structured, supported, and dynamic methodological training grounded in the realities of today's classrooms.

## **Conclusion**

The development of methodological competence among students of pedagogical universities in the field of labor and technology education is a decisive factor in ensuring the quality and effectiveness of teaching in schools. While the formal structure of teacher education programs in Uzbekistan includes methodological training, the practical application of this training remains limited and inconsistent. The study has revealed that many students struggle to connect theoretical knowledge with classroom realities, often due to insufficient practice opportunities, limited access to modern teaching tools, and a lack of systematic feedback during internships.

Improving methodological competence requires a multi-dimensional approach. Universities must restructure their curricula to place greater emphasis on experiential learning, including extended school-based practice, interactive simulation activities, and collaborative lesson design. Teacher educators should also receive continuous training in innovative pedagogical techniques and digital tools to ensure that students are exposed to up-to-date instructional models.

Additionally, the institutional culture of teacher preparation must shift toward reflective and inquiry-based learning. Embedding structured reflection, peer feedback, and mentorship into the methodological training process can significantly enhance students' ability to think critically about their teaching and make informed decisions in the classroom.

As Uzbekistan continues to modernize its educational system, preparing future teachers who are methodologically competent, technologically literate, and pedagogically flexible will be crucial. By addressing existing gaps and reinforcing the practical dimension of methodology training, pedagogical institutions can



better equip graduates for the evolving demands of labor and technology education, ultimately contributing to the development of a skilled and innovative workforce.

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