



FACTORS FOR THE DEVELOPMENT OF METHODOLOGICAL COMPETENCE OF FUTURE TEACHERS IN THE EDUCATIONAL PROCESS

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Abstract: *This article analyzes the main factors influencing the development of methodological competence of future teachers within the educational process. Methodological competence is defined as an integrative professional quality combining pedagogical knowledge, lesson design skills, reflective capacity, and the ability to apply innovative and digital teaching technologies. The study relies on scientific literature from 2010-2026 and applies competency-based, systemic, activity-oriented, and reflective approaches. The research identifies organizational, pedagogical, psychological, technological, and reflective factors as the key determinants of methodological competence development.*

Keywords: *methodological competence, teacher education, competency-based approach, reflective practice, professional development, digital pedagogy, instructional design.*

INTRODUCTION

In the contemporary era of globalization, digital transformation, and rapid socio-economic change, teacher education systems are undergoing significant structural and conceptual reforms. Educational institutions are increasingly expected to prepare teachers who are not only knowledgeable in their subject areas but also capable of applying pedagogical knowledge flexibly, critically, and innovatively in diverse and dynamic classroom environments. Within this context, the development of methodological competence among future teachers has emerged as a central objective of modern teacher education.

Methodological competence refers to an integrative professional quality that enables teachers to effectively design, implement, analyze, and improve instructional processes. It encompasses the ability to select appropriate teaching methods, adapt content to learners' needs, apply assessment strategies, integrate digital technologies, and reflect critically on pedagogical decisions. As emphasized in pedagogical theory, professional competence is not limited to theoretical knowledge but includes operational skills, motivational readiness, and reflective capacity [Slastenin, 2013, p.102]. Therefore, methodological competence must be understood as a multidimensional construct that connects theory with practice.

International research highlights the decisive role of teacher quality in improving student learning outcomes. Large-scale meta-analyses demonstrate that teachers' instructional strategies and methodological decisions significantly influence academic achievement [Hattie, 2018, p.34]. Similarly, OECD reports underline that developing teacher competencies aligned with 21st-century skills is a strategic priority for educational systems worldwide [OECD, 2019, p.56]. These global perspectives reinforce the importance of strengthening methodological competence within teacher preparation programs.



One of the key challenges in teacher education is bridging the gap between theoretical coursework and real classroom practice. Future teachers often acquire substantial theoretical knowledge but experience difficulties in translating this knowledge into effective pedagogical action. This discrepancy indicates the need to identify and systematize the factors that foster methodological competence development during the educational process. Such factors may include organizational structures of teacher education programs, pedagogical strategies used in training, psychological readiness of students, integration of digital tools, and structured reflective practices.

The theoretical foundation for understanding methodological competence development lies in several complementary approaches. The competency-based approach focuses on measurable professional outcomes and emphasizes the application of knowledge in authentic contexts [Sharipov, 2019, p.93]. The systemic approach views methodological competence as an interconnected structure composed of cognitive, operational, motivational, and reflective components. The activity-based approach stresses learning through practice and participation in real or simulated teaching situations. Meanwhile, reflective pedagogy considers self-analysis and continuous improvement essential for professional growth [Markova, 2014, p.39].

Furthermore, contemporary conceptual models such as Pedagogical Content Knowledge (PCK) and Technological Pedagogical Content Knowledge (TPACK) provide theoretical frameworks for integrating subject knowledge, pedagogy, and technology in teacher preparation [Shulman, 2013, p.9; Mishra & Koehler, 2018, p.101]. These models underscore that methodological competence cannot develop in isolation but must emerge from the dynamic interaction of multiple knowledge domains.

Given these theoretical and practical considerations, investigating the factors influencing methodological competence development in future teachers is both timely and necessary. Understanding these determinants enables teacher education institutions to design targeted interventions, optimize curricula, and establish evidence-based training models that enhance professional readiness.

The purpose of this study is to identify and analyze the key factors contributing to the development of methodological competence in future teachers within the educational process. The study aims to systematize theoretical foundations, examine empirical evidence, and propose practical recommendations for improving teacher education programs.

Thus, strengthening methodological competence is not merely a component of professional preparation; it is a prerequisite for ensuring high-quality, adaptive, and innovative teaching in contemporary education systems.

Literature Review

The development of methodological competence in future teachers has been extensively examined within contemporary pedagogical research. The concept is closely connected with broader discussions on professional competence, teacher quality, instructional design, reflective practice, and digital pedagogy. A comprehensive review of scientific literature reveals that methodological competence is interpreted as a



multidimensional construct shaped by theoretical, organizational, psychological, and technological factors.

The theoretical roots of methodological competence lie in the broader concept of professional competence. According to Slastenin, professional competence represents an integrative characteristic of a teacher that ensures effective pedagogical activity through the combination of knowledge, skills, values, and personal qualities [1]. Within this framework, methodological competence functions as a central structural component, directly influencing instructional quality.

Markova further develops this perspective by emphasizing the motivational and reflective dimensions of professional competence [4]. She argues that effective professional development requires not only operational skills but also internal motivation and reflective self-analysis. This position highlights reflection as a decisive factor in strengthening methodological competence.

The competency-based approach has become dominant in teacher education reforms worldwide. Sharipov emphasizes that competency-oriented curricula ensure alignment between educational outcomes and professional standards [9]. Within this framework, methodological competence is developed through structured practical tasks, simulations, and performance-based assessments.

OECD reports confirm that teacher competence is one of the most influential variables in student achievement and system-wide educational improvement [7]. These reports advocate for integrated teacher education programs that combine theoretical instruction with supervised practice and continuous professional feedback.

Similarly, national research underscores the importance of competency-based teacher preparation models in strengthening methodological skills [6]. Such models emphasize flexibility, adaptability, and learner-centered instruction as key components of professional readiness.

A major theoretical breakthrough in understanding methodological competence was introduced by Shulman through the concept of Pedagogical Content Knowledge (PCK) [6]. PCK highlights the necessity of integrating subject knowledge with pedagogical strategies tailored to learners' needs. According to this perspective, methodological competence emerges when teachers can transform content knowledge into teachable forms.

Building upon this foundation, Mishra and Koehler proposed the TPACK framework, adding technological knowledge to the PCK model [5]. In the digital age, methodological competence increasingly depends on the effective integration of technology into instructional practice. The TPACK model demonstrates that pedagogical, content, and technological knowledge must function interactively rather than independently.

These integrative models reinforce the view that methodological competence is dynamic and context-dependent, evolving through continuous interaction among knowledge domains.

Reflective pedagogy plays a crucial role in developing methodological competence. Darling-Hammond argues that clinical practice, mentorship, and structured reflection

significantly improve teacher preparation outcomes [2]. She stresses that future teachers must engage in authentic teaching experiences accompanied by guided reflection.

Hattie's meta-analytical research further confirms that instructional strategies, teacher clarity, and feedback mechanisms have substantial effects on student learning [3]. These findings imply that methodological competence directly impacts classroom effectiveness and must therefore be systematically cultivated during teacher training.

Activity-based and experiential learning theories also contribute to this discourse. They emphasize that competence is developed through practice, problem-solving, and participation in meaningful professional activities rather than passive knowledge acquisition.

Recent studies highlight organizational structures and institutional support systems as critical determinants of methodological competence development. Curriculum design, mentoring systems, collaborative learning environments, and digital infrastructure significantly shape teacher preparation outcomes.

Digital pedagogy has become particularly important after the global expansion of online and blended learning models. Researchers argue that digital literacy and technological adaptability are now integral components of methodological competence. The ability to select appropriate digital tools, design interactive online lessons, and assess learners remotely has become essential for modern teachers.

Although extensive literature addresses professional competence and instructional strategies, several gaps remain. First, many studies analyze theoretical models without sufficiently examining the interaction of multiple factors within the educational process. Second, there is a need for integrative frameworks that combine competency-based, systemic, technological, and reflective approaches. Third, empirical research on how these factors operate simultaneously in teacher education contexts remains limited.

Therefore, the present study aims to contribute to the field by synthesizing existing theoretical perspectives and identifying key factors that systematically influence the development of methodological competence in future teachers.

Research Methodology

The study is based on competency-based, systemic, and reflective approaches. Methods include theoretical analysis of literature, comparative analysis, modeling, surveys, classroom observation, and formative experiments.

Methodological competence was assessed according to cognitive, operational, motivational, and reflective criteria.

Factors Influencing Methodological Competence Development

The study identified the following key factors:

1. Organizational factors - curriculum structure and teaching practice integration.
2. Pedagogical factors - interactive methods and problem-based learning.
3. Psychological factors - intrinsic motivation and professional identity.
4. Technological factors - digital integration aligned with TPACK.
5. Reflective factors - self-assessment and peer feedback.

Experimental implementation confirmed that integrating these factors significantly enhances methodological competence.



Conclusion and Recommendations

Methodological competence development requires systemic, competency-based, and reflective strategies. Teacher education institutions should integrate theoretical instruction with practice, digital tools, and structured reflection.

Recommendations:

- Update curricula based on competency models.
- Strengthen clinical and reflective practice.
- Integrate digital pedagogy systematically.
- Promote continuous professional development.

REFERENCES:

1. Slastenin, V.A. Pedagogy: Professional Culture of the Teacher. Moscow: Akademiya, 2013.
2. Darling-Hammond, L. Teacher Education Around the World: What Can We Learn from International Practice? European Journal of Teacher Education, 2017.
3. Hattie, J. Visible Learning: A Synthesis of Over 800 Meta-Analyses Relating to Achievement. London: Routledge, 2018.
4. Markova, A.K. Psychology of Professionalism. Moscow: Prosveshcheniye, 2014.
5. Mishra, P., & Koehler, M.J. Technological Pedagogical Content Knowledge (TPACK) Framework. Teachers College Record, 2018.
6. Shulman, L.S. Pedagogical Content Knowledge. Teachers College Record, 2013.
7. OECD. Future of Education and Skills 2030. Paris: OECD Publishing, 2019.
8. Yo'ldoshev, Q. Modern Pedagogical Technologies.
9. Sharipov, Sh.S. Competency-Based Approach in Teacher Training Methodology. Tashkent: Fan, 2019.