
CONFERENCE ARTICLE**Developing School Teachers' Methodological Competence Based On Innovative Pedagogical Technologies****Musayeva Lobar**

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Abstract: This thesis highlights the pedagogical opportunities and effective mechanisms for developing school teachers' methodological competence based on innovative pedagogical technologies. In the modern educational process, teachers' methodological competence is regarded as one of the important factors ensuring the quality of education, and the necessity of using innovative pedagogical approaches for its development is substantiated. The study analyzes the potential of project-based learning, problem-based learning, case study, collaborative learning, the "flipped classroom," and digital educational technologies in developing teachers' competencies in lesson design, selecting and applying modern methods, assessing learning outcomes, and conducting reflective analysis of pedagogical activity. In addition, the main structural components of the pedagogical mechanism aimed at developing teachers' methodological competence are identified. This approach serves to strengthen teachers' readiness for innovative pedagogical activity and to increase the effectiveness of the educational process.

Keywords: Methodological competence, innovative pedagogical technologies, school teacher, pedagogical competence, project-based learning, problem-based learning, digital technologies, reflection, professional development.

Introduction

Today, the social, technological, and pedagogical changes taking place in the education system are leading to a fundamental renewal of the requirements imposed on the professional activity of school teachers. A modern teacher must not only possess in-depth knowledge of their subject, but also design the educational process on the basis of innovative approaches, purposefully select modern pedagogical technologies, effectively use digital educational tools, and take into account students' individual educational needs. From this perspective, developing teachers' methodological competence is one of the important factors in improving the quality of education.

Methodological competence encompasses a teacher's abilities to effectively organize pedagogical activity, correctly define lesson objectives, select educational content and methods, implement pedagogical technologies in practice, assess students' learning outcomes, and analyze their own activity. The development of this competence expands the teacher's opportunities to move from traditional pedagogical activity to innovative and results-oriented educational activity.

In current educational practice, the use of project-based learning, problem-based learning, case study, collaborative learning, the "flipped classroom," and digital pedagogical technologies is emerging as an effective means of expanding teachers' methodological opportunities. Such technologies require teachers not to limit themselves to the use of ready-made methodological patterns, but to independently develop educational strategies appropriate to the pedagogical situation, ensure students' active participation, and analyze learning outcomes.

Therefore, determining the content, pedagogical conditions, and effective mechanisms for developing school teachers' methodological competence on the basis of innovative pedagogical technologies is one of the relevant scientific and pedagogical issues. Along with ensuring teachers' professional development, this approach contributes to increasing the

innovativeness, flexibility, and effectiveness of the educational process.

The purpose of this study is to identify the pedagogical opportunities for developing school teachers' methodological competence on the basis of innovative pedagogical technologies and to substantiate approaches aimed at its improvement.

Main Part: In the modern education system, the development of teachers' professional competence is regarded as one of the important conditions for ensuring the quality of education. Professional competence is not limited only to a teacher's acquisition of knowledge related to their subject, but also includes the abilities to analyze pedagogical situations, select modern methods and technologies, effectively organize the educational process, cooperate with students, and regularly improve their pedagogical activity. A teacher's professional development is a continuous process closely connected with acquiring new pedagogical knowledge, enriching practical experience, and mastering modern educational technologies [8].

Innovative pedagogical technologies are considered one of the effective means of developing teachers' professional competence. An innovative approach involves introducing new ideas, methods, tools, and pedagogical solutions into the educational process. In this regard, the main attention is focused on transforming the teacher from a transmitter of ready-made knowledge into a pedagogue who organizes and guides the educational process and supports students' independent activity. The dissemination of innovations in educational practice and their adoption by teachers require the systematic organization of the process of mastering innovations [11].

A teacher's readiness for innovative activity is one of the important components of professional competence. In the process of innovative activity, the teacher tests new methods and tools, analyzes their impact on learning outcomes, and adapts effective pedagogical solutions to their own activity. Therefore, the introduction of innovative technologies contributes to the development of teachers' creative thinking, problem-solving ability, pedagogical initiative, and reflective skills [10; 11].

The integration of technological, pedagogical, and subject-content knowledge is also of great importance in developing professional competence. According to the TPACK concept proposed by Mishra and Koehler, effective teaching requires the integration of technological knowledge, pedagogical knowledge, and subject-content knowledge [6]. This approach shows that, along with knowing modern technology, a teacher should also know in which pedagogical situation, by what method, and for what educational purpose it should be used.

From this perspective, the use of digital educational technologies is of particular importance in developing school teachers' professional competence. Digital tools contribute to creating and using educational resources, monitoring students' activities, improving the assessment process, developing communication between teachers and students, and expanding opportunities for individualized learning [1; 2].

The ICT Competency Framework for Teachers developed by UNESCO is one of the international approaches aimed at developing teachers' competencies in using information and communication technologies for pedagogical purposes [1; 2]. This approach focuses on developing teachers not merely as users of digital technologies, but as educators capable of directing these technologies toward improving the educational process.

OECD studies also consider teachers' digital competencies in relation to general digital skills, digital pedagogical competencies, and professional digital competencies. It is not sufficient for a teacher simply to be able to use digital technology; the teacher must be able to select the technology for a specific pedagogical purpose, integrate it into the educational process, and assess the expected outcome of its use [3; 4]. According to OECD data, continuous professional development, flexible professional training opportunities, and institutional support are important for developing teachers' digital competencies [3; 4].

The DigCompEdu framework also serves as an important methodological basis for developing teachers' digital competence. This approach is aimed at developing teachers' professional activity in the digital environment and covers such areas as the use of digital resources, digital teaching and learning, digital assessment, and the development of students' digital competencies [7]. The use of this approach makes it possible to systematically develop school teachers' level of digital tool use.

Another important direction of innovative pedagogical technologies is the use of interactive teaching methods. Methods such as "Brainstorming," "Cluster," "Case Study," discussion, debate, role-playing, small-group work, and solving problem situations turn students into active participants in the educational process. The effective use of such methods requires teachers to carefully plan lessons, manage students' activities, formulate questions and tasks correctly, and take into account students' individual characteristics. Therefore, the regular use of interactive methods develops teachers' methodological and communicative competencies [8; 9].

Project-based learning also creates effective opportunities for developing teachers' professional competence. In project activities, the teacher performs the role of organizing and guiding students' independent inquiry rather than providing them with ready-made knowledge. In this process, the teacher carries out a number of professional tasks, such as identifying the problem, defining the project objective, planning the stages of activity, coordinating students' work, and assessing the final results. As a result, the teacher's organizational, communicative, methodological, and reflective competencies are developed.

Problem-based learning technology is also an important means of developing teachers' innovative pedagogical competence. By creating a problem situation, students can be directed toward independent thinking, applying existing knowledge in new situations, and searching for different solutions to the problem. In this process, the teacher develops skills in correctly selecting

the problem, encouraging students to engage in inquiry, and pedagogically supporting their activities.

The use of innovative pedagogical technologies also creates significant opportunities for developing teachers' reflective competence. Reflection enables the teacher to analyze their activity during the lesson, determine the effectiveness of the methods used, assess students' learning outcomes, and improve future pedagogical activity. Effective professional development programs are also important because they allow teachers to connect theoretical knowledge with practical activity and engage in regular reflection [8].

At the same time, the development of teachers' professional competence should not be limited only to individual pedagogical efforts. It is necessary to create systematic support mechanisms by school administration, methodological associations, professional development organizations, and other actors in the education system. OECD also emphasizes the importance of jointly developing standards, continuous professional development, and a broader system of institutional support in developing teachers' digital competencies [3; 4].

The innovative model for developing teachers' professional competence can be organized on the basis of the following interrelated stages: diagnostic stage, design stage, practical implementation stage, monitoring and reflection stage. At the diagnostic stage, the teacher's existing competencies and professional needs are identified. At the design stage, individual development goals and the innovative technologies necessary to achieve them are determined. At the practical stage, the selected methods and tools are introduced into pedagogical activity. At the monitoring and reflection stage, the obtained results are analyzed and directions for further professional development are determined.

To ensure the effectiveness of this model, it is advisable to use an individual approach in the process of teachers' professional development. This is because teachers differ in their levels of digital literacy, methodological experience, professional needs, and readiness for innovation. Therefore, it is necessary to differentiate professional development and training programs, increase the number of practical tasks, and expand opportunities for mentoring and experience exchange with colleagues [3; 4].

It is also important to develop criteria and indicators for assessing teachers' innovative competence. Such indicators may include the teacher's knowledge of innovative methods, ability to select them appropriately for pedagogical purposes, level of digital technology use, ability to design the educational process, effective communication with students, and ability to reflectively assess their own activity [1; 3; 7].

Thus, the use of innovative pedagogical technologies in developing school teachers' professional competence requires a comprehensive and systematic approach. Along with developing teachers' methodological, communicative, digital, organizational, creative, and reflective competencies, innovative technologies also create important conditions for increasing the effectiveness of the educational process. In this regard, the main factor is not the technology itself, but its purposeful, scientifically and methodologically grounded, and systematic application in accordance with specific pedagogical objectives [3; 6; 7].

On this basis, an innovative pedagogical mechanism aimed at developing teachers' professional competence in schools can be organized according to the sequence "diagnostics → individual development → selection of innovative technology → practical application → monitoring → reflection → improvement." This mechanism makes it possible to organize teachers' professional development as a continuous process and to develop pedagogical activity that meets the requirements of modern education.

Conclusion

In conclusion, the use of innovative pedagogical technologies in developing school teachers' professional competence is one of

the important directions of the modern education system. A teacher's professional competence includes not only subject knowledge, but also the ability to use modern pedagogical methods, apply digital educational tools appropriately for pedagogical purposes, design the educational process, cooperate effectively with students, and reflectively analyze their own activity.

The analysis shows that the systematic use of interactive teaching methods, project-based learning, problem-based learning, collaborative learning, digital educational technologies, and reflective approaches contributes to the development of teachers' methodological, communicative, digital, organizational, and innovative competencies. In this process, the effectiveness of using innovative technologies is determined not by their mere application, but by their selection in accordance with specific pedagogical objectives, educational content, and students' needs.

To develop teachers' professional competence, it is advisable to introduce a continuous mechanism that includes the stages of diagnostics, individual development, selection of innovative technology, practical application, monitoring, reflection, and improvement. This approach makes it possible to systematically organize teachers' professional development and increase their readiness for innovative pedagogical activity.

It is also important to support teachers' innovative activities in schools, regularly improve their qualifications, and expand opportunities for experience exchange, mentoring, and methodological cooperation. As a result, teachers' modern pedagogical competencies develop and the necessary conditions are created for improving the quality and effectiveness of the educational process.

In general, the scientifically and methodologically grounded and systematic use of innovative pedagogical technologies is an effective means of developing school teachers' professional competence, contributing to their adaptation to modern educational requirements, improvement of pedagogical skills, and achievement of high results in the educational process.

References

1. UNESCO. ICT Competency Framework for Teachers. Version 3. Paris: UNESCO, 2018. UNESCO rasmiy manbasi
2. UNESCO. UNESCO's ICT Competency Framework for Teachers (ICT-CFT). Digital Competencies and Skills. UNESCO ICT-CFT rasmiy sahifasi
3. OECD. OECD Digital Education Outlook 2023: Towards an Effective Digital Education Ecosystem. Paris: OECD Publishing, 2023. OECD rasmiy manbasi
4. OECD. Teacher Digital Competences: Formal Approaches to Their Development. OECD Digital Education Outlook 2023. OECD rasmiy manbasi
5. OECD. TALIS – Teaching and Learning International Survey. Paris: OECD. OECD TALIS rasmiy sahifasi
6. Mishra, P., & Koehler, M. J. (2006). Technological Pedagogical Content Knowledge: A Framework for Teacher Knowledge. *Teachers College Record*, 108(6), 1017–1054.
7. Redecker, C. (2017). European Framework for the Digital Competence of Educators: DigCompEdu. Luxembourg: Publications Office of the European Union.
8. Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). *Effective Teacher Professional Development*. Palo Alto, CA: Learning Policy Institute.
9. Hattie, J. (2009). *Visible Learning: A Synthesis of Over 800 Meta-Analyses Relating to Achievement*. London: Routledge.
10. Fullan, M. (2013). *Stratosphere: Integrating Technology, Pedagogy, and Change Knowledge*. Toronto: Pearson.
11. Rogers, E. M. (2003). *Diffusion of Innovations*. 5th ed. New York: Free Press.
12. O'zbekiston Respublikasi Maktabgacha va maktab ta'limi vazirligi. 2022–2026-yillarda maktab ta'limini rivojlantirish bo'yicha Milliy dastur. O'zbekiston Respublikasi Maktabgacha va maktab ta'limi vazirligi
13. O'zbekiston Respublikasi Maktabgacha va maktab ta'limi vazirligi. "Ta'lim-tarbiya jarayoniga innovatsion texnologiyalar joriy etiladi", 2025. Rasmiy maqola
14. O'zbekiston Respublikasi Oliy ta'lim, fan va innovatsiyalar vazirligi huzuridagi Innovatsion rivojlanish agentligi. Innovatsion rivojlanish agentligi rasmiy sayti. Innovatsion rivojlanish agentligi