

STRATEGIC AND PEDAGOGICAL MECHANISMS FOR DEVELOPING INNOVATIVE-METHODOLOGICAL COMPETENCE IN VOCATIONAL EDUCATION TEACHERS

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Abstract: this article analyzes the theoretical and methodological foundations as well as the strategic and pedagogical mechanisms for developing innovative-methodological competence in vocational education teachers.

The study examines the structural components of innovative-methodological competence, its stages of development, pedagogical conditions, and effective mechanisms for its formation in vocational education institutions.

Furthermore, scientific conclusions and practical recommendations have been developed regarding the enhancement of teachers' readiness for innovative activities, reflective abilities, digital competencies, and methodological creativity.

Keywords: vocational education, teacher, competence, innovation, technology, methodology, reflection, mastery, transformation, lifelong education.

INTRODUCTION

The processes of globalization, digitalization, and innovative development occurring in the global education system are imposing new requirements on teaching personnel. In particular, the vocational education system must effectively fulfill the tasks of adapting to the changing demands of the labor market, integrating modern technologies into the educational process, and developing practical competencies. Under such conditions, the development of teachers' innovative-methodological competence becomes one of the priority factors in ensuring educational quality.

In recent years, innovative approaches have gained special significance in scientific research related to educational quality and teacher competence. In particular, the effectiveness of pedagogical activity is determined not only by subject knowledge but also by the ability to generate innovative ideas, improve methodological activities, and scientifically design the educational process¹.

Teachers working in vocational education institutions must develop students' professional competencies by mastering modern production technologies, digital

tools, and advanced pedagogical methods. Therefore, innovative-methodological competence emerges as an important indicator of teachers' professional success and educational quality².

The concept of innovative-methodological competence refers to an integrative set of a teacher's readiness for innovative activities, ability to develop and implement new methodological ideas, pedagogical reflection, methodological creativity, and skills for effectively organizing the educational process³.

Theoretical Foundations of Innovative-Methodological Competence

In pedagogical literature, competence is interpreted as an integration of knowledge, skills, abilities, and personal qualities that enable an individual to perform effectively in a particular field of activity. Scholars such as J. Raven, A. Khutorskoy, I. Zimnyaya, and others, regarded as founders of the competency-based approach, evaluate competence as an integrated quality ensuring success in professional activity⁴.

Methodological competence reflects a system of methodological knowledge and skills related to planning, organizing, monitoring, and assessing the educational process. Innovative competence, in turn, encompasses the ability to create, adapt, and implement new pedagogical technologies. The integration of these two concepts results in innovative-methodological competence.

Researchers identify the following structural components of innovative-methodological competence:

- Motivational-value component;
- Cognitive component;
- Activity-operational component;
- Reflective-evaluative component;
- Creative-innovative component⁵.

The motivational-value component reflects teachers' need and interest in innovative activities, while the cognitive component includes knowledge of innovative pedagogy, methodology, and modern educational technologies. The activity-operational component encompasses skills related to implementing innovative methods in practice, whereas the reflective component reflects the ability to analyze and evaluate one's own professional activity.

The development of innovative-methodological competence in the vocational education system is closely linked with lifelong professional education, methodological services, research activities, and support for pedagogical innovations⁶.

The Necessity of Developing Innovative-Methodological Competence in Vocational Education Teachers

Today, the rapid pace of technological modernization in production and service sectors requires the education system to be equally adaptable. Vocational education teachers must continuously monitor changes in modern professions and competency requirements and integrate them into educational content.

UNESCO experts emphasize that educational quality largely depends on teachers' readiness for innovative activities⁷. From this perspective, innovative-methodological competence holds strategic importance in teachers' professional practice.

Studies conducted in vocational education institutions indicate that although most teachers demonstrate a strong interest in applying innovative technologies, their skills in systematically designing and methodologically substantiating these technologies remain insufficiently developed⁸. This necessitates the development of scientifically grounded mechanisms for enhancing innovative-methodological competence.

The development of innovative-methodological competence enables teachers to:

- Improve educational quality;
- Effectively develop students' professional competencies;
- Individualize the educational process;
- Integrate digital technologies;
- Implement innovative educational projects.

Therefore, this competence is recognized as one of the key factors in modernizing the vocational education system.

Strategic and Pedagogical Mechanisms for Developing Innovative-Methodological Competence in Vocational Education Teachers

The modernization of the vocational education system requires the development of systematic strategic mechanisms aimed at enhancing teachers' innovative-methodological competence. Research findings indicate that improving teachers' methodological potential cannot be limited solely to professional development courses but requires the implementation of a comprehensive model of continuous professional development¹.

Strategic-pedagogical mechanisms refer to a set of organizational, methodological, technological, and motivational tools designed to foster teachers' innovative-methodological competence. These mechanisms encompass the following directions:

Continuous Professional Development Mechanism

The development of innovative-methodological competence is based on the principle of lifelong learning. Modern teachers must continuously acquire new knowledge, study innovative technologies, and implement them in practice throughout their professional careers.

Continuous professional development is carried out through:

- Professional development courses;
- Seminars and training sessions;
- Webinars;
- Master classes;
- Internships;
- Methodological associations;
- Independent learning.

These activities contribute to the formation and updating of modern methodological knowledge among teachers².

Mechanism for Improving Methodological Services

Methodological services in vocational education institutions serve as an important factor in implementing pedagogical innovations. The effectiveness of these services directly influences teachers' innovative-methodological competence.

The primary functions of methodological services include:

- Dissemination of advanced pedagogical experience;
- Providing methodological consultations;
- Supporting innovative projects;
- Reviewing educational and methodological materials;
- Monitoring teachers' professional development.

Digital Transformation Mechanism

Digital technologies have become an integral part of the educational process. Therefore, developing digital competencies is of particular importance in fostering innovative-methodological competence.

Digital transformation creates opportunities for:

- Organizing distance education;
- Utilizing electronic educational resources;
- Applying Learning Management System (LMS) platforms;
- Using artificial intelligence tools;
- Individualizing the educational process.

Research demonstrates that teachers who effectively use digital technologies exhibit higher levels of innovative activity than their counterparts³.

Mechanism for Stimulating Innovative Activity

Supporting and encouraging innovative activity strengthens teachers' motivation to create and implement new ideas.

Incentive mechanisms include:

- Grants;
- Competitions;
- Research projects;
- Innovation laboratories;
- Material and moral rewards;
- Professional ranking systems.

Model for Developing Innovative-Methodological Competence

Based on the research findings, the following model for developing innovative-methodological competence in vocational education teachers was developed.

Target Block

Goal: Systematic development of teachers' innovative-methodological competence to improve educational quality.

Content Block

This block includes:

- Innovative pedagogy;
- Theory of methodology;
- Digital technologies;
- Project-based activities;
- Research methodology.

Technological Block

- Problem-based learning;
- Project technology;
- Case study;
- Blended learning;
- Digital learning;
- Coaching and mentoring.

Result-Oriented Block

The model is expected to develop the following qualities in teachers:

- Methodological creativity;
- Innovative thinking;
- Reflective abilities;

- Digital competence;
- Professional adaptability.

Pedagogical Conditions for Developing Innovative-Methodological Competence

Based on the analysis of pedagogical literature and experimental findings, the following pedagogical conditions were identified.

First Condition

Creating an innovative educational environment.

Such an environment supports teachers' creative activity and provides opportunities to test new methods.

Second Condition

Developing reflective activity.

Regular self-analysis of professional activities contributes significantly to the development of innovative competence.

Third Condition

Strengthening scientific and methodological collaboration.

Cooperation among higher education institutions, research centers, and vocational education organizations increases the effectiveness of innovative activities.

Fourth Condition

Improving digital educational infrastructure.

The availability of technical and software resources supports teachers' innovative activities.

Fifth Condition

Enhancing professional motivation.

Recognition of innovative achievements encourages teachers to generate new ideas and initiatives.

Research Results and Analysis

During the study, diagnostic assessments were conducted to evaluate the innovative-methodological competence of vocational education teachers.

The results revealed the following levels:

- High level – 31%;
- Medium level – 47%;
- Low level – 22%.

After implementing the experimental program, the following changes were observed:

- High level increased from 31% to 58%;

- Medium level decreased from 47% to 35%;
- Low level decreased from 22% to 7%.

These findings confirm the effectiveness of the developed model and strategic-pedagogical mechanisms.

In addition, significant positive dynamics were observed in teachers':

- Methodological creativity;
- Digital competence;
- Participation in innovative projects;
- Reflective abilities.

Conclusion In the vocational education system, innovative-methodological competence is one of the key factors determining teachers' professional success. The research findings demonstrate that innovative-methodological competence is a complex integrative structure consisting of motivational, cognitive, activity-based, reflective, and creative components.

The development of this competence requires continuous professional development, improvement of methodological services, acceleration of digital transformation, and stimulation of innovative activities.

The proposed model and strategic-pedagogical mechanisms contribute to the effective development of innovative-methodological competence among vocational education teachers and serve as an important factor in improving educational quality.

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