



**METHODOLOGY FOR MODELING THE INTEGRATED CONTENT OF
CONTINUOUS SPECIALIZED EDUCATION ON THE BASIS OF
INNOVATIVE DEVELOPMENT**

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A B S T R A C T	K E Y W O R D S
<p>This article scientifically substantiates the methodology for modeling the integrated content of Continuous Specialized Vocational Education (CSVE) based on innovative development. The study defines the general concept of innovative processes, innovative competence, and innovative module, and classifies four categories of innovations: organizational, content-related, technological, and pedagogical. The goals and stages of operational design of integrative content, seven main functions of professional practice, and the mechanism for step-by-step formation of innovative competencies are described in detail. Scientific substantiation and consistent application of the methodology ensures the formation of all types of competencies - general cultural, general professional, and special professional competencies - thereby preparing well-rounded and adaptable graduates for the demands of the contemporary knowledge economy.</p>	<p>Innovative education, integrated content, innovative competence, modularization, professional practice, innovative processes, pedagogical innovations, continuous vocational education.</p>

INTRODUCTION

The creation of the CSVE space requires an innovative environment, innovative educational content, and the use of innovative technologies. The most critical factors of CSVE space effectiveness are: organizational innovations and the activity of their implementation; content-related innovations and their variative multiplicity; and the innovative orientation of educational-program and methodological materials alongside the innovative potential of students, the innovative competence of scientific-pedagogical personnel, educational-material resources, and the optimal application of pedagogical and interactive technologies.

Structuring, content-richness, and innovative orientation are the main pedagogical conditions for effectiveness. The optimal construction of the CSVE content structure is based on the theory of vocational education, the theory of integration, the theory of modeling, a systemic approach, and the regularities of system formation in activity. The general orientation of modeling, creating, and developing the continuous vocational education space consists in the modeling and implementation

of the innovative component of educational programs, the integration (continuity) of content, and the development of students' educational, scientific, and research activities.

In the present study, key definitions are established as follows: innovative processes are defined as managed processes of creating, perceiving, evaluating, mastering, and applying pedagogical innovations; innovative competence is defined as the ability to creatively apply knowledge, skills, personal qualities, and practical experience to innovative activities in the relevant professional field; and an innovative module is defined as a part of the core professional educational program designed for mastering innovative content within the CSVE space. These precise definitions form the conceptual scaffolding upon which the entire methodology is constructed.

Research Methodology

The main principles of the integrative approach to developing the content of continuous vocational education are: continuity, integrity, consistency, innovativeness, scientific rigor, fundamentalization, and practical orientation. The modeling of integrative content within the innovative-oriented CSVE space is based on identifying and linking the integrated and interdisciplinary content of the mastered standards of vocational and general secondary education.

The author proposes a step-by-step mechanism for modeling the integrative content of the space, comprising six stages: (1) selecting the structure and purpose of content integration - the direction and model of integration are determined; (2) preliminary evaluation of the appropriateness of integration based on the cycles and disciplines within them, and decision-making; (3) conducting a SWOT analysis of the content of integrated curricula and programs, identifying common cycles and disciplines, determining guiding points of differentiation, and developing a structural model of the integrative curriculum; (4) developing integrated modules built on the basis of integrating the theoretical and practical content of the levels and specializations being integrated - an interdisciplinary module incorporating 3–5 related theoretical disciplines and a professional module incorporating specialized disciplines; (5) pilot testing of integrative modules; and (6) expanding the scope of innovative activity, monitoring and evaluating the results obtained, and making decisions on utilizing the developed materials in other educational institutions.

Innovations in the CSVE space are classified into four categories: (1) organizational innovations - innovations in the structure of the CSVE multi-structured space in variable organizational models and in the system of consistent step connections between them; (2) content-related innovations - innovations in the content of the multi-directional and multi-level CSVE space; (3) technological innovations - innovations in the specific methods and approaches for implementing the integrative content of the CSVE space; and (4) pedagogical innovations - innovations in the mechanisms for developing and implementing educational-methodological support. This classification provides a comprehensive framework for identifying, analyzing, and systematically addressing innovation across all dimensions of the CSVE space.

Analysis and Results

The following goals were established for the operational design of integrative content: forming integrative same-name and combined modules along with a consistent list of competencies; harmonizing the professional orientation of educational content with the needs of the individual, the labor market, economic sectors, and the social sphere; and fundamentalizing vocational education

content aimed at integrating various specializations based on common professional functions. These goals collectively ensure that the integrative curriculum serves not only academic purposes but also meets the practical requirements of graduates' future professional environments.

Mandatory requirements for developing integrative content for the CSVE space include: using consistent lists of general and professional competencies as a basis; developing and implementing integrated vocational modules for various specializations; ensuring the existence of consistent vocational modules for same-name specializations; introducing elements of innovativeness into industrial (professional) practice; organizing innovative forms of intermediate assessment; maintaining an orientation toward consumers of educational services (students, educational institutions); and developing control-measurement materials and assessment tools for evaluating the level of formation of integrative general and professional competencies.

The methodology for modeling the integrative content of professional practice defines seven key functions of practice. The first is the adaptive (developmental) function: realized through familiarization with various types of professional activity and entry into the system of professional relations and connections. The second is the educational function: realized through forming the future specialist's special and unique professional competencies and developing their professional consciousness. The third is the upbringing function: entering real professional activity plays a preparatory role for the student - fostering understanding of the necessity for continuous independent learning and self-improvement. The fourth is the reflexive-creative function: provides the opportunity to form, test, and refine the specialist's reflexive-creative competencies under real-world conditions. The fifth is the diagnostic-prognostic function: consists in the influence on implementing and improving the individual educational trajectory within the CSVE space. The sixth is the function of fundamentalizing professional training: encompasses the deepening of theoretical preparation and students' scientific-research activities. The seventh is the function of practice continuity: eliminates content duplication in practice programs across specializations and activities within the same field.

Competency development for students within the CSVE space is realized in three main directions. General cultural competencies encompass the ability to understand the role of innovation in professional activity, to select appropriate scientific methods, to acquire new knowledge and skills, and to present the results of scientific research. General professional competencies encompass readiness to engage in innovative activities, the ability to continuously develop across all levels of vocational education, and a flexible approach to new professional situations. Special professional competencies encompass readiness to select the appropriate technology for implementing innovative (scientific-research) activities, the ability to organize creative group work, and the capacity to reflexively evaluate one's own activities.

The step-by-step formation of innovative competence proceeds as follows: beginning in the 1st year of higher education with the mastery of independent work skills; in the 2nd year, entry into educational-research activities and the mastery of general research competencies; in the 3rd year, the continuation of developing scientific-research activities and the enhancement of capability and readiness for innovative activity; and in the 4th–5th years, moving onto individual trajectories for the parallel mastery of additional specializations. The formation of innovative competence is the foundation of effective future scientific-professional-creative activity.

The final indicators of the methodology show that the methodology for modeling integrative content in the CSVE space is built with mandatory consideration of the following components: the

methodological component - goals, tasks, principles, content, methods, activity conditions, descriptions of activity results, and criteria and indicators defining its innovative orientation; the organizational component - organizational-methodological support of CSVE; and the didactic component - forms, methods, and tools of educator and student activity. Together, these three components create a comprehensive framework that addresses every dimension of the integrated educational process.

Conclusion

The methodology for modeling the continuous vocational education space ensures: the implementation of the innovative component of educational programs; a systematic approach to forming innovatively competent specialists; the application of innovative educational technologies; the integration of vocational education with professional education; and the maximum satisfaction of the innovative development needs of students and the professional field.

The implementation of interlinked (integrative) curricula ensures high-quality practical training for professional activity, improves students' professional development, deepens their scientific and theoretical training, and contributes to the formation of professional creative-research and innovative competence. The consistent application of a scientifically grounded integrated innovative methodology ensures the formation of competencies across all categories in students, fully confirming the theoretical and practical significance of this methodology.

In conclusion, the proposed methodology represents a coherent, theoretically grounded, and practically applicable framework for transforming CSVE into a genuinely innovative educational ecosystem. By systematically addressing content integration, organizational flexibility, individual learning trajectories, and the development of innovative competencies, the methodology equips vocational education institutions with the tools necessary to prepare graduates who are not only technically proficient but also adaptable, reflective, and capable of driving innovation within their chosen professional fields.

References

1. Werbach, K., & Hunter, D. (2012). *For the win: how game thinking can revolutionize your business*. Philadelphia: Wharton Digital Press. 148 p.
2. Abdullina, O.A. (1990). *General pedagogical training of a teacher in the system of higher education*. Moscow: Prosveshcheniye. 141 p.
3. Grebenyuk, O.S. (1995). *Pedagogy of individuality*. Kaliningrad: KSU. 94 p.
4. Monakhov, V.M. (1995). *Technology of pedagogical activity design*. Volgograd: Peremena. 230 p.
5. Shiyarov, E.N., & Kotova, I.B. (1999). *Development of a personality in education*. Rostov-on-Don: Phoenix. 544 p.
6. Sorochnikaya, E.N. (2004). *Social pedagogy*. Rostov-on-Don: RGPU. 288 p.
7. Soboleva, E.A. (2005). *Professional practice in the system of specialist training*. Moscow: Pedagogika. 196 p.
8. Slastenin, V.A. (2004). *Pedagogy of professional education*. Moscow: Academy. 368 p.
9. Borytko, N.M., & Solovtsova, I.A. (2007). *Education in the space of professional pedagogical culture*. Volgograd: VSPU. 160 p.

10. Khutorskoy, A.V. (2004). Practical work on didactics and modern methods of teaching. St. Petersburg: Piter. 541 p.
11. Gessen, S.I. (1995). Foundations of pedagogy: introduction to applied philosophy. Moscow: Shkola-Press. 448 p.
12. Ryabalkina, N.V. (1999). Technology of development of individual educational trajectory. Barnaul: BGPU. 68 p.