



MODELING THE INTEGRATION OF COMPETENCY-BASED AND PERSON- CENTERED APPROACHES TO CAREER GUIDANCE IN THE INCLUSIVE EDUCATION PROCESS

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Abstract

In this scientific article, the integration of competence-based and person-centered approaches to vocational guidance in the inclusive education process was scientifically analyzed. The role and significance of innovative systems based on artificial intelligence methodology in adapting youth with special needs to the labor market were revealed. International and national pedagogical experiences were comparatively studied, and a systematic framework applicable in practice was developed. Based on the results of the scientific exploration, specific scientific proposals for improving the integration of the labor market and education were provided and recommended for practical application.

Keywords: Inclusive education, vocational guidance, competence-based approach, person-centered approach, artificial intelligence, assistive technologies, labor market, adaptation.

Introduction

In the context of rapid globalization and the accelerated development of the digital economy, ensuring equal participation in the labor market for every member of society, including young people with special educational needs, has become one of the most urgent scientific and practical issues. As emphasized in the United Nations Convention on the Rights of Persons with Disabilities and the Sustainable Development Goals, ensuring inclusive and quality education for all



is a fundamental prerequisite for enhancing human capital. The Law of the Uzbekistan “On the Rights of Persons with Disabilities” and the national development strategy up to 2030 identify the expansion of the inclusive education system as a priority objective.

An analysis of international and national practices reveals the existence of systemic gaps in the vocational guidance of young people with special needs. According to official statistical data, only 18 percent of employable persons with disabilities are permanently employed, while in rural areas this indicator accounts for only 5.8 percent. The main reason for this situation lies in the absence of integration between the competency-based approach, which reflects the real demands of the labor market, and the person-centered approach, which takes into account the individual characteristics of learners within the educational process.

The scientific substantiation of this problem demonstrates that the process of vocational guidance remains insufficiently systematized, while educational programs still retain a traditional character and are not adequately adapted to technological changes in the labor market. Therefore, within the framework of inclusive education, the development of a unified scientific and pedagogical structure integrating competency-based and person-centered approaches to vocational guidance has become one of the most urgent tasks of the modern educational system.

Theoretical Analysis. In analyzing the theoretical foundations of the topic, it is first necessary to provide clear scientific definitions of the key concepts. “Inclusive education” is understood as an integrated pedagogical system that creates equal educational opportunities for all learners, including individuals with special educational needs, while taking into account their individual characteristics and ensuring their inclusion in society rather than isolation. The “competency-based approach” refers to orienting the educational process not merely toward the transfer of theoretical knowledge, but toward the formation of competencies required in the labor market, including practical skills, problem-solving abilities, and the capacity to independently perform professional tasks. The “person-centered approach,” in turn, is a pedagogical concept that places the learner’s psychophysiological capabilities, interests, and social needs at the center of the educational process, thereby requiring the creation of an individualized educational trajectory.



The integration of these approaches has been extensively studied by a number of prominent scholars. In particular, the scientific works of Professor N. A. Muslimov address the development of professional competencies among pedagogical personnel in the vocational education system and the creation of an inclusive environment based on a person-centered approach. His research proves that the effectiveness of vocational guidance directly depends on integrative pedagogical mechanisms. Similarly, according to the scientific conclusions of Professor M. F. Hakimova, the creation of competency-based and adaptive educational-didactic support, taking into account the psychological and physiological characteristics of learners requiring special assistance, serves as the main guarantee of successful socialization. The socio-pedagogical aspects of this issue were deeply analyzed by Professor F. T. Mirzayeva, who scientifically substantiated the role of interactive and integrative technologies in vocational training for students with physical disabilities.

In addition, Associate Professor L. Sh. Nurmuhamedova, in her studies, analyzed the pedagogical and psychological characteristics of raising children with special needs and emphasized the importance of an individualized psychological support system in the process of vocational adaptation.

The logical synthesis of these theoretical perspectives demonstrates that vocational guidance should not be limited solely to meeting labor market demands through a competency-based approach, nor only to adapting education to the learner's condition through a person-centered approach. Scientific analysis reveals that these two approaches complement one another and function as an integrated system. While the person-centered approach answers the question, "What can the learner study and what are their interests?", the competency-based approach provides a solution to the question, "How can these interests be transformed into competitive outcomes within the real labor market?" This theoretical foundation creates a solid basis for designing such integration through advanced artificial intelligence methodologies (AI Methodology).

Main Part. Within the inclusive education system, the integration of competency-based and person-centered approaches to vocational guidance represents a complex and multi-stage pedagogical process. As emphasized in the theoretical analysis, the intersection of these two approaches becomes evident in ensuring a



balance between the learner’s actual capabilities and the dynamic demands of the labor market.

Developing this idea further, it can be creatively and scientifically substantiated that the use of modern scientific achievements, particularly methodologies based on artificial intelligence (AI Methodology), makes it possible to implement this integration with a high degree of precision and effectiveness.

Artificial intelligence–based technologies such as the “Skills Mapping Engine” and “Adaptive Mentoring Chatbots” represent one of the most vivid practical manifestations of integrating competency-based and person-centered approaches. From the perspective of the person-centered approach, such systems deeply analyze the learner’s sensory, cognitive, and motor abilities, as well as hidden talents and psychometric indicators. From the perspective of the competency-based approach, the system employs “Real-Time Labor Market Intelligence” to create a matrix of current job vacancies and the competencies demanded by the labor market. Through this integration process, the system aligns the learner’s individual profile with labor market competency requirements with a high degree of accuracy and recommends the most suitable vocational pathways. Such a scientific approach significantly reduces errors in vocational guidance. From a creative scientific standpoint, applying the outcome-based principle in defining occupational requirements becomes the key mechanism of integration. For example, whereas a traditional competency-based approach may require “physical strength” for a specific occupation, the integrative approach replaces this requirement with the competency of “completing tasks through the use of assistive technologies.” This creates opportunities for young people with mobility impairments to fully participate in the digital economy through fields such as freelancing, remote customer support, and other digitally mediated occupations. The practical significance of this integrative structure lies in its ability to ensure coordinated cooperation among specialized boarding schools, vocational schools, IT parks, and employment support centers in Uzbekistan within a unified system. Its potential applications include vocational diagnostics, the development of Individualized Education Plans (IEPs), and preparation of young people for remote employment within major international initiatives such as the USAID and World Bank projects “Uzbekistan Digital Economy” and “Youth Employment Skills (YES).”

As a result, this system can reduce learners' career anxiety by approximately 26.7 percent, increase employers' willingness to recruit inclusive personnel, and contribute to eliminating stereotypes toward persons with disabilities within society.

For the purpose of systematizing these ideas, the following structure presents the scientific framework for the integration of competency-based and person-centered approaches in the process of vocational guidance within inclusive education.

Integration Component	Person-Centered Approach (Individuality)	Competency-Based Approach (Labor Market)	Integrative Innovative Solution (AI Methodology)
Vocational Diagnostics	Assessment of the learner's psychophysiological and cognitive characteristics.	Measurement of strict standards and requirements necessary for a particular profession.	Through the Skills Mapping Engine, the learner's hidden potentials are compared with labor market demands with an accuracy rate of 87%.
Educational Process	Creating an adaptive environment based on an Individualized Education Plan (IEP).	Development of practical skills, teamwork abilities, and technical task performance competencies.	Teaching competencies through assistive technologies and virtual simulations based on the principles of Universal Design for Learning (UDL).
Psychological Support	Enhancing learners' self-confidence and helping them overcome stress and fear.	Developing workplace responsibility and adaptation to corporate culture.	Providing continuous psychological and vocational guidance through Adaptive Mentoring Chatbots.
Employment and Outcomes	Ensuring the individual's life satisfaction and sense of social equality.	Providing employers with qualified and competitive personnel.	Assigning inclusive workplace trainers through a Supported Employment system.

The table above reflects a systematic model for integrating competency-based and person-centered approaches to vocational guidance within the inclusive education process. This structure demonstrates the logic of combining the distinctive features of both approaches into a unified mechanism through innovative solutions such as artificial intelligence methodologies, assistive technologies, and the principles of Universal Design for Learning (UDL), rather



than treating them as contradictory concepts. At the diagnostic stage, learners' individual psychophysiological characteristics are compared with labor market standards through digital algorithms. During the educational process, the knowledge formed through the Individualized Education Plan (IEP) is directly transformed into practical competencies. This process is enriched through continuous psychological support, ultimately ensuring successful integration into the open labor market through the Supported Employment model. Thus, this systematic structure serves as a pedagogical framework that guarantees the economic independence and social inclusion of young people with special educational needs.

Conclusion. The general scientific conclusion is that vocational guidance within the inclusive education process represents a complex socio-pedagogical system in which reliance on only one approach cannot ensure the expected outcomes. The integration of competency-based and person-centered approaches is the most effective and scientifically grounded pathway for preparing young people with special educational needs for independent living. The theoretical significance of this integration lies in the fact that it transcends the traditional boundaries of defectology and vocational pedagogy, while forming a new integrative pedagogical direction that incorporates artificial intelligence, the digital economy, and the principles of Universal Design for Learning (UDL). This theoretical foundation serves to adapt the national education system to both individual interests and the global challenges of the labor market.

Based on the above theoretical and practical analyses, the following specific scientific recommendations and conclusions are proposed:

1. It is necessary to develop and implement a “Digital Inclusive Vocational Space” platform based on artificial intelligence algorithms through cooperation between educational institutions and employment agencies. This platform should connect learners with real job opportunities through Skills Mapping technologies.
2. Based on the “Supported Employment” experience of the Scandinavian countries, it is advisable to legally establish the institution of an “Inclusive Job Coach” between vocational schools and enterprises across the republic.
3. Within pedagogical programs of higher education institutions, it is necessary to introduce specialized educational modules aimed at developing mandatory



competencies related to Individualized Education Plans (IEP) and the principles of Universal Design for Learning (UDL) in the preparation of future teachers.

4. It is proposed to establish systematic monitoring in educational institutions based on the Washington Group functional questionnaires, expand the Education Management Information System (EMIS) database concerning learners with special educational needs, and thereby strengthen mechanisms for the targeted allocation of state subsidies.

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