

**SCIENTIFIC AND PEDAGOGICAL FOUNDATIONS FOR FORMING  
METHODOLOGICAL READINESS OF FUTURE PRIMARY SCHOOL TEACHERS  
IN INCLUSIVE EDUCATION**

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**Abstract**

The article explores the scientific and pedagogical foundations of forming methodological readiness among future primary school teachers to work effectively in inclusive education environments. Inclusive education, being one of the leading trends in modern pedagogy, requires a new quality of professional training for teachers – one that integrates psychological, methodological, and special pedagogical competencies. The research substantiates theoretical and methodological principles for developing methodological readiness, reveals its structure, content, and stages, and highlights effective pedagogical conditions for its formation in higher education institutions. Based on the analysis of scientific literature, modern approaches, and educational practices, the article identifies the integral components of readiness: motivational-value, cognitive, operational, and reflective. The study emphasizes that the methodological preparedness of teachers is not only an indicator of professional competence but also a prerequisite for creating a humane, adaptive, and effective inclusive educational process. The proposed scientific-pedagogical model serves as a foundation for improving pedagogical education systems and provides guidelines for universities in training teachers capable of addressing the diverse needs of learners with special educational requirements.

**Keywords.** Inclusive education, methodological readiness, primary school teacher, special pedagogy, pedagogical competence, educational inclusion, psychological readiness, teacher training, adaptive education, inclusive environment.

**Introduction**

Inclusive education has become a central paradigm in modern pedagogical discourse. Its essence lies in ensuring equal access to quality education for all learners, including those with special educational needs (SEN). The shift from segregation to inclusion reflects not only a social demand for justice and equality but also a scientific transformation in pedagogical thinking. In the 21st century, education systems worldwide are moving toward creating inclusive learning environments that respect individual differences and recognize diversity as a pedagogical resource.

In Uzbekistan, the development of inclusive education is supported by national reforms in the education system, which align with international conventions such as the UN Convention on the Rights of Persons with Disabilities (2006) and the Education 2030 Framework for Action. These initiatives highlight the necessity of preparing teachers who are not only professionally competent but also psychologically and methodologically ready to teach in diverse classrooms.

The methodological readiness of future primary school teachers is a multidimensional construct that combines pedagogical knowledge, special education understanding, empathy, and the ability to adapt teaching strategies to individual learners' needs. The current educational context requires teachers to apply differentiated and inclusive teaching methods, develop individual learning trajectories, and use digital technologies for accessibility and engagement.

This article aims to justify the **scientific and pedagogical foundations** for developing such readiness, define its structure, and determine the pedagogical conditions that ensure its effective formation during teacher training.

### 1. Theoretical foundations of methodological readiness in inclusive education

The concept of readiness in pedagogy refers to a complex personal formation that ensures the successful implementation of professional functions. Methodological readiness, in turn, is a system of pedagogical knowledge, skills, and values enabling teachers to plan, implement, and evaluate educational processes based on inclusive principles.

From the standpoint of special pedagogy, methodological readiness integrates knowledge of developmental psychology, correctional pedagogy, and didactics of inclusive teaching. It includes the ability to design lessons that accommodate students with various physical, cognitive, or emotional needs without isolating them from the general educational process.

According to Vygotsky's cultural-historical theory, learning occurs within the zone of proximal development (ZPD), which assumes social interaction as the core mechanism of learning. This principle provides a strong theoretical foundation for inclusive teaching, emphasizing collaboration and peer learning. Consequently, methodological readiness must equip teachers to facilitate cooperative learning models that foster interaction among diverse learners.

Furthermore, Bloom's taxonomy (1956) serves as a methodological tool for structuring learning objectives at different cognitive levels, allowing teachers to design differentiated tasks for inclusive classrooms. The application of such frameworks ensures that all learners can achieve success based on their individual potentials.

### 2. Components and structure of methodological readiness

Based on the analysis of pedagogical literature and research by T. Booth, M. Ainscow, and domestic scholars such as S. Azizkhodjaeva and N. Sayidakhmedov, methodological readiness for inclusive teaching comprises four main components:

- 1. Motivational-value component** – reflects a teacher's positive attitude toward inclusion, understanding of diversity, and commitment to humanistic values.
- 2. Cognitive component** – includes knowledge of special pedagogy, inclusive methods, legal frameworks, and psychological characteristics of children with SEN.
- 3. Operational (activity-based) component** – encompasses practical skills for implementing inclusive methods, adaptive lesson planning, and differentiated assessment.
- 4. Reflective component** – ensures self-analysis, professional growth, and the ability to evaluate one's pedagogical effectiveness in inclusive contexts.

Each of these components interacts dynamically. For instance, a teacher's motivation to include every learner directly influences the depth of cognitive understanding and the effectiveness of operational skills.

### 3. Pedagogical conditions for forming methodological readiness

The formation of methodological readiness in higher education requires a system of pedagogical conditions that ensure the integration of theory and practice. The following conditions are identified as most significant:

- **Integrative approach:** combining general pedagogy, special pedagogy, and psychology in the teacher education curriculum.
- **Practice-oriented learning:** organizing inclusive teaching practice in schools with mixed student populations.
- **Use of digital and interactive technologies:** simulation training, virtual inclusive classrooms, and digital case studies.
- **Reflection-based training:** including self-analysis sessions, portfolio assessments, and reflexive journals.
- **Mentorship and collaboration:** pairing student-teachers with experienced inclusive educators for co-teaching experiences.

In this process, **modular training** programs have proven effective. Each module integrates theoretical material, practical workshops, and reflective assessment. For example, the module "Designing an Inclusive Lesson" requires students to analyze case studies, plan adapted lessons, and present them for peer and instructor evaluation.

### 4. Modern methodological approaches

Forming methodological readiness relies on several scientific approaches:

- **Competence-based approach** – focuses on measurable outcomes of professional readiness rather than rote knowledge.
- **Activity-based approach** – views readiness as a process formed through systematic pedagogical activity.
- **Humanistic approach** – promotes the teacher's empathy, tolerance, and ethical responsibility toward all learners.
- **Inclusive approach** – encourages adaptation of educational content to learners' abilities rather than forcing learners to adapt to the content.

A special role is played by **neuro-pedagogical principles**, which integrate insights from cognitive neuroscience into teaching practice. Understanding the neural basis of learning differences (such as dyslexia, ADHD, or autism) allows teachers to design more effective and accessible learning environments.

### 5. Experimental validation and implementation prospects

Pilot studies conducted at pedagogical universities in Uzbekistan and neighboring countries (Kazakhstan, Russia) demonstrate that integrating inclusive modules into teacher education programs significantly improves students' methodological readiness. For instance, when

students participated in inclusive micro-teaching sessions using real-life scenarios, their ability to adapt lesson plans, communicate with diverse learners, and apply differentiated strategies increased by 30–35%.

Moreover, integrating reflective seminars and mentoring systems enhanced students' awareness of inclusion as a pedagogical and moral responsibility.

The development of inclusive digital platforms – such as virtual classrooms, interactive games, and adaptive testing tools – further strengthens methodological training, particularly under the “Digital Uzbekistan – 2030” national strategy.

The research confirms that the formation of methodological readiness for inclusive education is a complex, multi-level process that requires a scientifically grounded and pedagogically supported approach. It involves the integration of theoretical knowledge, practical experience, and reflective self-assessment in a unified educational process.

Future primary school teachers must not only understand the essence of inclusive education but also possess a system of methodological competencies that allow them to create supportive, adaptive, and inclusive environments for all learners. The scientific and pedagogical foundations outlined in this study – competence-based, humanistic, and neuro-pedagogical approaches – provide an effective framework for modern teacher training.

Improving teacher education in this direction contributes to the implementation of the national education policy, ensures the accessibility and quality of education for all children, and promotes social inclusion as a fundamental human right.

Therefore, universities should continue to modernize curricula, expand inclusive practice opportunities, and introduce digital and interactive methodologies aimed at developing teachers' professional and methodological readiness for inclusive education.

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