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Formation of Diagnostic Competencies of the Future Teacher-Psychologists in the Context of Inclusive Education

Abstract

Introduction. The development of inclusive educational practice in the Republic of Kazakhstan, where over 68,000 children with special educational needs are integrated into mainstream educational institutions, necessitates a reconceptualisation of the professional preparation of educational psychologists in the formation of diagnostic competencies. *Methodology and Methods.* Methods of theoretical analysis of domestic and international research in the field of professional readiness of educational psychologists were employed. A structured interview study was conducted with 5 lecturers to examine current issues in the preparation of prospective educational psychologists. *Results.* The structure of diagnostic competencies was determined, comprising cognitive, operational, and personal elements. Distinctive features of psychodiagnostic work with various nosological groups of children were identified. Directions for modernisation of the educational process were analysed: expansion of the practical component, integration of digital technologies, and development of a supervisory support system. *Scientific Novelty.* Requirements for diagnostic competencies of educational psychologists within the context of inclusive educational environments were analysed. *Practical Significance.* The research findings may be utilised for enhancing educational programmes for the professional preparation of future educational psychologists in the development of diagnostic competencies.

Keywords: diagnostic competencies, educational psychologist, inclusive education, professional preparation, psychological and educational assessment.

Introduction. Inclusive education (Stubbs, 2008; Daniels, 2013) as a priority direction in the development of contemporary educational policy in the Republic of Kazakhstan (Makoelle, 2025) necessitates a fundamental revision of approaches to the professional preparation of teaching personnel. The implementation of principles of equality in educational opportunities for all categories of learners, enshrined in national legislation, presents qualitatively new requirements for teacher competence in the field of psychological and educational assessment. Accordingly, the formation of diagnostic competencies becomes one of the key objectives of contemporary teacher education (Ospanova, 2020; Baimenova, 2015), as the effectiveness of individualising the educational process and the successful inclusion of children with special

educational needs in mainstream educational environments depends precisely upon the quality of diagnostic activity.

According to data from psychological-medical-pedagogical consultations in the Republic of Kazakhstan, the country has 203,717 children with special educational needs from birth to 18 years of age, whilst over 68,000 children with SEN are enrolled in mainstream educational institutions, demonstrating that conditions for inclusive education have currently been established in 86% of mainstream schools (compared with 30% in 2015), which illustrates significant progress in the development of inclusive educational environments (Ministry of Education of the Republic of Kazakhstan, 2024, paragraph 1). This trend is determined by a complex of factors, including the enhancement of diagnostic methods for identifying

developmental disorders, increased awareness within the parental community regarding the rights of children with developmental differences, as well as changing social attitudes towards inclusive education. These processes highlight the necessity of preparing teaching personnel who possess a high level of diagnostic competencies and are capable of ensuring adequate assessment of the special educational needs of each learner.

High-quality psychological and educational assessment (Teshaboev, 2024) serves as the cornerstone of effective inclusive education, as it is precisely upon the basis of diagnostic data that individual educational pathways are designed. Timely and accurate assessment enables the identification of not only current difficulties in development and learning, but also the learner's potential resources, which constitutes a necessary condition for developing personalised educational programmes.

Within the system of psychological and pedagogical support for inclusive education, a particular role belongs to the educational psychologist (Ashton, 2006), who represents a key agent in the diagnostic process. The professional activity of educational psychologists within inclusive settings requires mastery of a broad spectrum of diagnostic methodologies and the capacity for comprehensive analysis of assessment results. Educational psychologists must possess competencies in the field of differential assessment, enabling them to distinguish between various types of developmental disorders and determine optimal learning conditions for each child.

However, analysis of existing educational programmes in higher education institutions demonstrates inadequate preparation of graduates for conducting high-quality diagnostic activity within inclusive environments. Traditional approaches to professional preparation do not fully account for the specificity of working with children who have diverse educational needs, leading to deficits in practical skills and limitations in theoretical knowledge regarding contemporary diagnostic methods.

Materials and Methods. The diagnostic competencies of educational psychologists

represent an integrative system of professional capabilities that ensure effective identification, analysis, and interpretation of the characteristics of pupils' psychological development within educational environments, forming the foundation of specialist professional activity and determining the quality of psychological and pedagogical support for participants in the educational process.

Structurally, the diagnostic competencies of educational psychologists (Kerimbayeva, 2023) comprise three interrelated components: cognitive (knowledge), operational (skills and abilities), and personal (professionally significant qualities). The cognitive component encompasses fundamental knowledge in the fields of general, developmental, educational, and special psychology, understanding of psychological development patterns, mastery of theoretical foundations of psychodiagnostics, and knowledge of the normative-legal framework of education. The operational component includes practical skills in conducting diagnostic procedures, interpreting results, compiling psychological reports, and developing recommendations. The personal component presupposes the presence of such professionally important qualities as empathy, tolerance, ethical responsibility, critical thinking, and capacity for reflection.

Diagnostic competencies acquire particular significance within the context of inclusive education, where consideration of the maximum diversity of learners' educational needs is required. The specificity of assessment within inclusive environments is determined by the necessity of applying an interdisciplinary approach, which presupposes close collaboration between educational psychologists and special educators, speech and language therapists, medical specialists, and teachers, ensuring comprehensive evaluation of child development and forming a holistic understanding of their educational needs. The interdisciplinary nature of the diagnostic process requires educational psychologists to possess capacity for professional communication, ability to integrate data from various specialists, and readiness for collegial decision-making (Table 1).

Table 1. *Structure of Diagnostic Competencies*

Psychological and educational assessment	directed towards studying the individual characteristics of learners within the context of educational activity. It presupposes systematic analysis of cognitive processes, emotional-volitional sphere, personal characteristics, and the child's social adaptation. Psychological and educational assessment is oriented not only towards identifying the actual level of development, but also towards determining the zone of proximal development, which enables the development of individually-oriented educational programmes.
Differential assessment	presupposes the educational psychologist's ability to distinguish variants of normal development from pathological conditions, as well as to identify specific developmental characteristics of various etiologies. This competency requires profound knowledge of age-related developmental norms, understanding of deviation criteria, and capacity for differentiated evaluation of identified characteristics, for instance, the assessment of borderline conditions and atypical developmental variants, which demands a high level of professional expertise.
Mastery of diagnostic tools and methods	The educational psychologist must professionally master standardised psychodiagnostic methodologies, be able to conduct structured and unstructured observation, and organise diagnostic interviews of various types. Competent use of diagnostic instrumentation presupposes understanding of the psychometric characteristics of methodologies, conditions for their application, limitations and possibilities for result interpretation; the ability to adapt diagnostic procedures to the individual characteristics of the examinee, including children with disabilities.

The integration of all components of diagnostic competencies ensures the formation of professional readiness in educational psychologists for conducting high-quality diagnostic activity within contemporary educational environments. The development of these competencies requires continuous professional improvement, study of new diagnostic approaches and methods, as well as reflection upon one's own professional activity. Only comprehensive development of all structural components of diagnostic competencies will enable educational psychologists to effectively address the tasks of psychological support for learners and contribute to creating optimal conditions for their development and learning.

Assessment within inclusive educational environments (Michalik, 2020; Hendrawati, 2023) represents a complex interdisciplinary process requiring a fundamentally different approach compared to traditional models of special education. The contemporary paradigm of inclusive education necessitates reconceptualisation of diagnostic procedures,

taking into account the heterogeneity of the learner population, the diversity of their educational needs, and sociocultural characteristics.

One of the key features of assessment within inclusive environments is its multi-level character, presupposing the conduct of screening, in-depth, and dynamic examinations with the involvement of specialists from various fields. An interdisciplinary team, including educational psychologists, special education teachers, speech and language therapists, medical professionals, and social pedagogues, ensures a holistic approach to child development assessment, enabling identification not only of current difficulties but also potential opportunities for academic and social progress.

The assessment of children with various nosological forms of developmental disorders (Klin, 1997; Achenbach, 2008) within inclusive education settings is associated with a number of specific methodological and practical complexities (Table 2).

Table 2. *Features of Assessment for Children with Various Nosological Forms*

Children with autism spectrum disorders	When examining children with autism spectrum disorders, particular significance is acquired by consideration of sensory characteristics, communication patterns, and behavioural manifestations, which requires adaptation of standardised diagnostic procedures and creation of a special sensory-comfortable environment. The use of visual supports, structuring of examination time frames, and ensuring predictability of procedures become integral components of quality assessment for this category of children.
Children with developmental delays	Assessment of children with developmental delays requires a differentiated approach to evaluating cognitive processes, taking into account the uneven development of various psychological functions. It is necessary to conduct longitudinal observations to identify the zone of proximal development and determine optimal pedagogical strategies. Particular attention is devoted to analysing the child's capacity for learning, their ability to transfer acquired skills, and utilisation of various forms of assistance.
Children with sensory impairments	Assessment of children with sensory impairments presupposes the use of specialised equipment and adapted methodologies. When examining children with hearing impairments, it is necessary to employ visual stimuli, sign language, or finger spelling, depending upon the degree of hearing loss and the communication means used by the child. Assessment of children with visual impairments requires the use of tactile and auditory evaluation methods, adaptation of test materials taking into account residual vision or its complete loss.

A fundamental principle of contemporary assessment within inclusive environments is the resource-oriented approach, which presupposes identification and actualisation of the child's strengths alongside identification of areas requiring corrective and developmental intervention. This approach is based upon Howard Gardner's theory of multiple intelligences (Helding, 2009) and strengths-based theory, emphasising the individual abilities, interests, and talents of each child. Resource-based assessment includes evaluation of social skills, creative abilities, motivational sphere, adaptive behaviour, and other competencies that serve as support for compensating existing impairments.

Ethical aspects of assessment within inclusive educational environments are regulated by principles of deontology and require strict adherence to professional standards. The principle of confidentiality presupposes limiting access to diagnostic information to the circle of specialists directly participating in the educational process, and obtaining informed consent from parents or legal guardians for conducting examinations and using their results.

Prevention of stigmatisation represents one of the central ethical tasks of the diagnostic process. Educators must avoid using labels and stereotypical representations, focusing on describing the child's specific educational needs. Assessment results should be formulated constructively, emphasising developmental possibilities and necessary conditions for successful learning, rather than deficits and limitations.

The principle of non-discrimination requires ensuring equal opportunities for all children when undergoing diagnostic procedures, regardless of their ethnic background, socio-economic status, linguistic characteristics, or nature of developmental disorders. Cultural-linguistic adaptation of diagnostic instruments becomes particularly relevant within polyethnic educational environments.

The dynamic character of assessment within inclusive environments presupposes regular monitoring of child development and adjustment of educational programmes in accordance with changing needs, ensuring personalisation of the educational process and contributing to maximum realisation of each learner's potential within mainstream educational institutions.

Thus, assessment within inclusive educational environments represents a complex, multi-faceted process requiring high professional competence from future educational psychologists, adherence to ethical principles, and use of contemporary scientifically-grounded methods for evaluating the development of children with diverse educational needs.

The formation of diagnostic competencies in future educational psychologists (Kerimbayeva, 2023) represents a multi-faceted process requiring integration of theoretical knowledge, practical skills, and contemporary technological solutions (Table 3).

Table 3 – Components of Diagnostic Competency Formation in Future Educational Psychologists

Theoretical preparation	represents the fundamental foundation for forming diagnostic competencies, encompassing in-depth study of the foundations of special psychology and inclusive education. Within this area, students master the conceptual foundations of psychodiagnostics, study patterns of psychological development in children with various educational needs, and analyse theoretical models of inclusive education and their practical application. Particular attention is devoted to studying ethical principles of psychodiagnostic activity, normative-legal foundations of working with children with disabilities, as well as contemporary concepts of the social model of disability. The theoretical component of preparation includes mastering the methodological foundations of psychometrics, statistical methods for processing diagnostic data, and principles of interpreting psychological examination results.
Practice-oriented learning	represents an element of professional preparation that ensures transformation of theoretical knowledge into practical abilities and skills, implemented through the use of case-study methods, enabling students to analyse real situations from educational psychology practice and make grounded diagnostic decisions. Simulation technologies create a safe educational environment for practising diagnostic procedures, allowing future specialists to acquire experience in conducting examinations without risk of causing harm to real clients. Particular significance lies in organising practical work with children under supervision of experienced specialists, which ensures formation of professional identity and development of empathetic abilities. During practice-oriented learning, students master skills of establishing contact with children of various age groups, learn to adapt diagnostic procedures to individual characteristics of examinees, and develop observational abilities and analysis of behavioural manifestations.
Use of contemporary diagnostic methodologies	represents an innovative direction in the preparation of educational psychologists, reflecting current trends in the development of psychodiagnostics. The introduction of digital tools into the educational process enables students to master computerised methods of psychological testing, software complexes for processing and interpreting examination results, and systems for monitoring children's psychological development. Neuropsychological approaches enrich the diagnostic arsenal of future specialists, providing opportunities for deeper understanding of mechanisms underlying psychological developmental disorders and development of individualised corrective and developmental programmes. Mastering contemporary methodologies also presupposes studying principles of evidence-based practice in psychology, critical analysis of validity and reliability of diagnostic instruments, as well as ethical aspects of using technologies in work with children.

The integration of all preparation components ensures formation of comprehensive diagnostic competence in future educational psychologists, encompassing theoretical

awareness, practical abilities, and readiness to use innovative technologies in professional activity. Such an approach to professional preparation contributes to forming specialists

capable of effectively addressing tasks of psychological and pedagogical support for children within inclusive education settings, ensuring high quality diagnostic services and adherence to professional and ethical standards of practice.

Results and Discussion. With the aim of studying practical experience and identifying problems in the preparation of educational psychologists, an empirical study was conducted among the academic staff of a higher education

institution providing training in the direction 6B01101 Pedagogy and Psychology. The study involved 5 lecturers from the Department of Pedagogy and Psychology. The data collection method employed was a structured interview, including three key questions directed towards analysing existing educational programmes, identifying difficulties in forming diagnostic skills, and determining the role of practical preparation in the professional development of future educational psychologists.

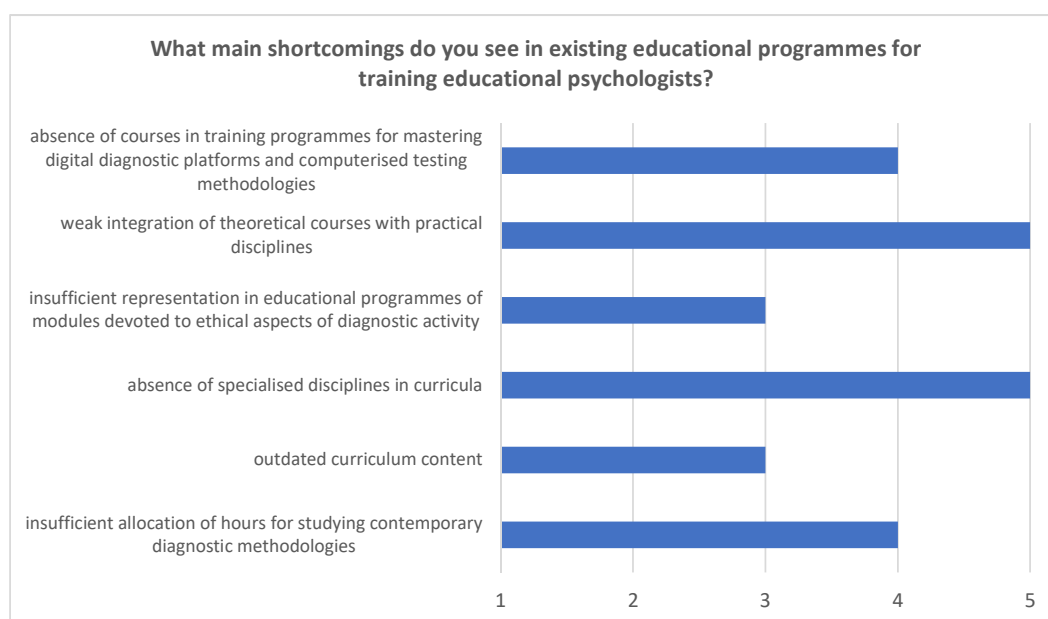


Figure 1: Results of Academic Staff Responses to the First Block of Questions

Analysis of respondents' answers to the first question "What main shortcomings do you see in existing educational programmes for training educational psychologists?" (Figure 1) revealed systemic problems in the organisation of the educational process. Four out of five surveyed lecturers noted insufficient allocation of hours for studying contemporary diagnostic methodologies, whilst three respondents indicated outdated programme content that does not reflect current trends in psychodiagnostic development. All study participants emphasised the absence of specialised disciplines in curricula devoted to

working with children with autism spectrum disorders and other neurodevelopmental characteristics.

Respondents also noted insufficient representation in educational programmes of modules devoted to ethical aspects of diagnostic activity (three out of five surveyed), as well as weak integration of theoretical courses with practical disciplines (all participants). Particular concern among lecturers is caused by the absence of courses in training programmes for mastering digital diagnostic platforms and computerised testing methodologies, which was noted by four out of five respondents.

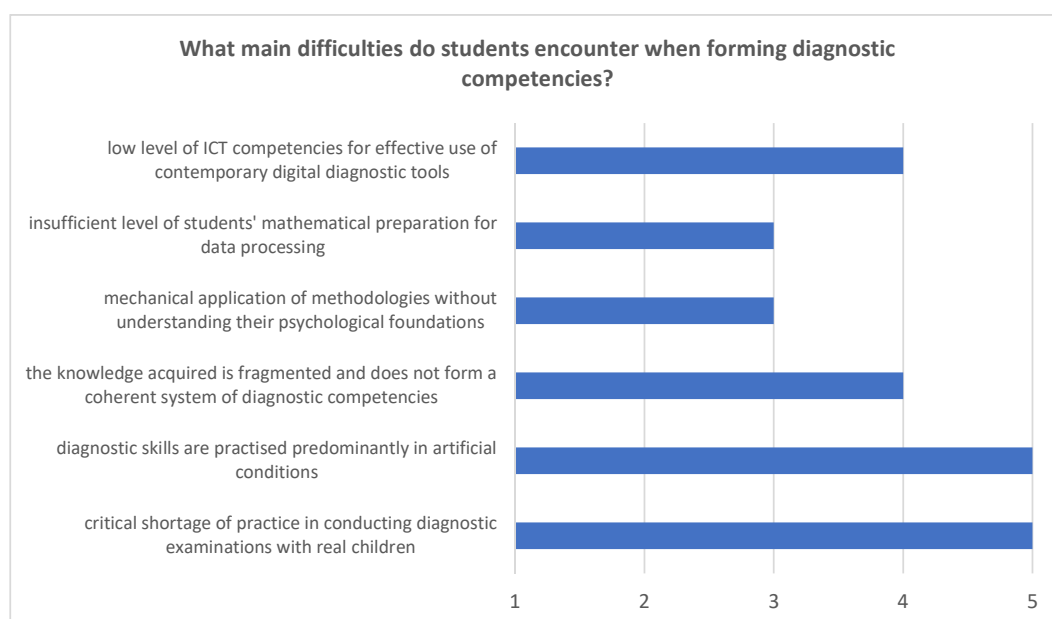


Figure 2: Results of Academic Staff Responses to the Second Block of Questions

The second block of questions “What main difficulties do students encounter when forming diagnostic competencies?” (Figure 2) revealed key barriers in professional preparation. All study participants indicated a critical shortage of practice in conducting diagnostic examinations with real children. Lecturers noted that students have the opportunity to practise diagnostic skills predominantly in artificial conditions, using role-playing games and simulations, which does not ensure formation of stable professional competencies.

A significant problem is represented by weak interdisciplinary integration in the educational process, which was indicated by four out of five study participants. Respondents emphasised that knowledge acquired by students within various disciplines (general psychology, developmental psychology, special psychology, pedagogy) remains fragmented and does not form a coherent system of diagnostic competencies. Lecturers noted students’ difficulties in establishing connections between theoretical knowledge and practical diagnostic tasks, which manifests

in mechanical application of methodologies without understanding their psychological foundations.

Additional difficulties are related to students’ insufficient level of mathematical preparation (three respondents), which complicates mastery of statistical methods for processing diagnostic data, as well as low levels of information and communication competence (four participants), hindering effective use of contemporary digital diagnostic tools.

Analysis of responses to the third question “How do you assess the role of practical training and supervision in forming diagnostic competencies?” (Figure 3) demonstrated unanimous recognition by lecturers of the critical importance of these components in the educational process. All study participants emphasised that high-quality pedagogical practice is a necessary condition for forming professional diagnostic competencies; however, the existing organisation of practical training does not meet contemporary requirements.

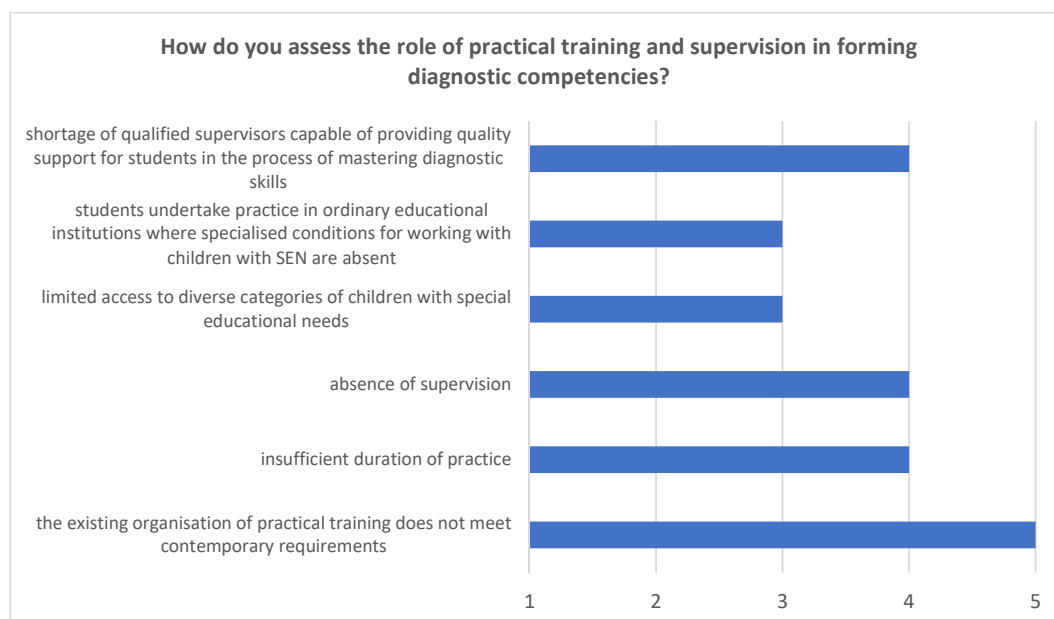


Figure 3: Results of Academic Staff Responses to the Third Block of Questions

Respondents identified several key problems in practice organisation: insufficient duration of practical periods (four out of five surveyed), absence of supervision (four participants), limited access to diverse categories of children with special educational needs (three respondents). Lecturers noted that in most cases students undertake practice in ordinary educational institutions where specialised conditions for working with children with SEN are absent, which does not allow formation of necessary inclusive competencies.

Particular attention was devoted by study participants to the role of supervision in professional development. Four out of five respondents indicated an acute shortage of qualified supervisors capable of providing quality support for students in the process of mastering diagnostic skills. Lecturers emphasised that effective supervision should include not only monitoring correct application of methodologies, but also developing students' reflective abilities, forming professional ethics, and skills for interpreting diagnostic data within the context of individual child characteristics.

The results of the conducted study demonstrate the existence of problems in preparing educational psychologists for diagnostic activity. The identified deficits concern all levels of the educational process:

from curriculum content to organisation of practical training. The obtained data indicate the necessity for fundamental revision of approaches to forming diagnostic competencies, taking into account contemporary requirements of inclusive education and achievements in psychological science. The research results may serve as a foundation for developing educational programmes and technologies for training educational psychologists capable of effectively conducting diagnostic activity within inclusive educational environments.

Conclusion. The conducted study confirms the significance of transforming the system of professional preparation for educational psychologists within the context of developing inclusive educational practice in the Republic of Kazakhstan. The shortcomings of educational programmes identified through empirical analysis, including imbalance between theoretical and practical preparation components, absence of contemporary diagnostic technologies, and insufficient supervisory support, demonstrate the necessity for modernising approaches to forming diagnostic competencies. Particular relevance is acquired by implementing innovative educational technologies that contribute to developing future educational psychologists' capacity for effective psychodiagnostic support of

children with special educational needs within mainstream educational institutions.

Prospects for further development of this research direction are related to developing a comprehensive model of professional preparation for educational psychologists that integrates achievements of contemporary psychological science, requirements of the normative-legal framework of inclusive education, and demands of educational practice. The most important directions for improving the teacher preparation system include creating specialised

educational-methodological complexes oriented towards mastering resource-oriented diagnostic approaches, forming a network of base sites for organising quality practical preparation of students, as well as developing a system of continuous professional development for practising educational psychologists. Implementation of these measures will contribute to enhancing the quality of psychological and pedagogical support for participants in the inclusive educational process and ensuring equal opportunities for all categories of learners.

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