

Original Article

Readiness of future special educators to foster psychological well-being in inclusive settings

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ABSTRACT

This article explores and develops an integrative model of the readiness of future special education teachers to foster students' psychological well-being in inclusive education environments. The development of inclusive education is currently considered a strategic priority of educational policy, aimed at ensuring equal rights and opportunities for all students, including those with special educational needs. Successful implementation of inclusion principles requires not only a regulatory and material framework but also a high degree of teacher readiness to work in a diverse environment. The study emphasizes that students vary in their level of preparation, learning speed, motivation, and social experience, requiring teachers to employ flexible teaching strategies and individualize the educational process. One of the key factors in successful inclusion is psychological well-being, which is closely linked to students' motivation, social adaptation, and academic achievement. This paper aims to theoretically substantiate and develop an integrative model that integrates the readiness of future special educators and the preservation of children's psychological well-being. The model is based on the principles of systemic, competency-based, and student-centered approaches and takes into account the motivational, cognitive, and activity-based components of specialist training. A study conducted among third- and fourth-year special education students at E.A. Buketov Karaganda University revealed that knowledge-based readiness prevails over psychological and activity-based readiness, indicating the need to strengthen practice-oriented and value-based training. The integrative model allows us to consider teacher readiness and student well-being as interrelated phenomena, thereby improving the quality of inclusive education, ensuring psychological safety, and creating conditions for the personal development of all participants in the educational process.

Keywords: Psychological well-being, Integrative model, Teacher readiness, Pedagogical training, Educational environment

Introduction

The development of inclusive education is a priority area of modern educational policy, aimed at ensuring equal opportunities for all students, regardless of their physical,

mental, or social disabilities. However, the successful implementation of inclusion principles requires not only a legal and regulatory framework and logistical support, but also a high degree of preparedness on the part of all participants in the educational process, primarily teachers and administration, to work with diverse educational needs.

Pershina N. A., Kuzmina Yu.V., Shamardina M. B. come to the general opinion that in pedagogical science, understanding the conditions of diversity of educational needs is associated with the recognition that students differ in the pace and method of acquiring knowledge, level of preparation, psychophysiological characteristics, motivation, social experience, and cultural background. In any educational group, there are students with different learning styles, development levels, interests, and

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needs [1-3]. Abramo G. *et al.* in turn, indicate that this diversity should be viewed not as a problem, but as a resource for enriching the educational process [4-6]. Thus, gradually, modern society comes to understand diversity as the norm.

Inclusive education and an inclusive educational environment are based on the individualization of learning, where teachers implementing inclusive education select the content, methods, and pace of learning in accordance with the individual capabilities and needs of students using differentiated tasks and variable forms of presentation of material. Hentonen A.G. is confident that this approach was created by special educators and is intended to create conditions for the inclusion of all students in the educational process, including those with special educational needs [7-9]. Thus, a special educator ensures the availability of educational materials, adapted programs, and special methods. Systematic support for adaptation, development of motivation and emotional well-being, teamwork, fostering tolerance, and the ability to predict learning success are the foundation of the psychological and pedagogical focus of special educators. In this regard, teamwork among specialists is also considered, as they contribute to creating an inclusive educational environment, thereby influencing the special educator's readiness to implement it. Kazakh authors Duzelbaeva A.B., Movkebaeva Z.A., and Khamitova D.S. note that flexibility in organizing the educational process, the ability to choose forms and methods of teaching, and the introduction of technologies that take into account different styles of information perception (visual, auditory, kinesthetic) require that today's teachers have skills aimed at creating a variable educational environment [10-13]. In pedagogical science, this area is considered within the context of inclusive pedagogy, differentiated learning, and a competency-based approach, with an emphasis on recognizing the unique value of each student and creating conditions for the development of their personal and academic potential. However, the successful implementation of these principles is impossible without specialists who possess a high level of professional and personal readiness to work in diverse educational settings. That is why, according to the views of Bilyalova D.N. and Movkebaeva Z.A., the training of future special educators should be capable not only of mastering modern methods but also of ensuring the psychological well-being of all participants in the educational process, and creating a truly inclusive and supportive environment [14-18].

One of the key aspects of successful inclusion is the psychological well-being of students, which is directly linked to their academic achievement, motivation, and social adaptation. Insufficient preparedness of future special education teachers and the educational environment for inclusive education can lead to decreased emotional comfort, increased anxiety, and the development of negative attitudes toward the educational process among students, including those with special educational needs. At the same time, modern studies, such as those by Maksakova L.V., increasingly point to the need for a comprehensive approach to the relationship between readiness for inclusion and psychological well-being [19-23].

Thus, the study, aimed at identifying and theoretically substantiating an integrative model of the relationship between readiness for inclusive education and the psychological well-being of students, appears relevant in both scientific and practical terms, contributing to improving the quality of educational services and the formation of a favorable inclusive environment. The development of an integrative model that accounts for the structural components of readiness and their impact on students' emotional and social states will enable the creation of more effective strategies to support and guide all participants in the educational process.

Materials and Methods

Based on an analysis of the work of domestic and foreign researchers in the field of inclusive education, a synthesis of educational and methodological ideas, as well as a generalization of our own and advanced pedagogical experience, an attempt was made to answer the question: is readiness for inclusive education and the psychological well-being of students realized on the basis of a justified integrative model of interconnection.

The methodological basis of the study was formed by the principles of systemic, competency-based, and personality-oriented approaches, which enable us to consider readiness for inclusive education as a multi-level phenomenon encompassing motivational, cognitive, activity-based, and value-based components. The work uses a set of theoretical and empirical methods, including modeling and the method of mathematical statistics.

As part of this study, a survey was conducted among third- and fourth-year students majoring in "Defectology" at the E.A. Buketov Karaganda University to determine their professional and personal readiness for future work in their field. 60 participants were asked 20 questions, grouped in a way that allowed them to assess three types of readiness in future special educators:

1. information (knowledge readiness);
2. psychological (personal) readiness;
3. professional (activity) readiness:
 - answers to statements 1 through 5 characterize the level of informational (knowledge) readiness of teachers to work with children with special educational needs.
 - answers to statements 6 through 13 characterize the level of psychological (personal) readiness.
 - answers to statements 14 through 20 characterize the level of professional (activity) readiness.

The survey results by group are presented in diagrams for clarity. Grouped results for three types of readiness of future special educators:

1. information (knowledge readiness);
2. psychological (personal) readiness;
3. professional (activity) readiness (**Figure 1**).

For this purpose, the number of correct answers in the questionnaire was calculated, and the percentage in the group of

future special educators in the 3rd and 4th years was reported. To justify the choice of these particular categories of future special educators, several arguments are highlighted:

Professional training stage. Third- and fourth-year students have already completed the basic psychological and pedagogical disciplines, possess the necessary theoretical foundation, and are beginning to understand the specifics of their future profession. Therefore, their opinions and level of readiness reflect the true development of inclusive competence.

Formation of professional identity. In their senior years, students develop a professional identity and identify with the role of a teacher. This makes their answers more informed and relevant to practical situations.

Practical training. The third and fourth years provide teaching internships and active participation in educational processes. Students interact with a variety of children, including those with special educational needs, thereby assessing their true readiness for inclusive education.

Relevance for forecasting. Future teachers from these courses will soon begin working in schools. Therefore, their level of preparedness has not only theoretical but also practical significance for the education system. Thus, the choice of 3rd-4th-year students is determined by their professional maturity, practical experience, and proximity to the direct implementation of inclusive education.

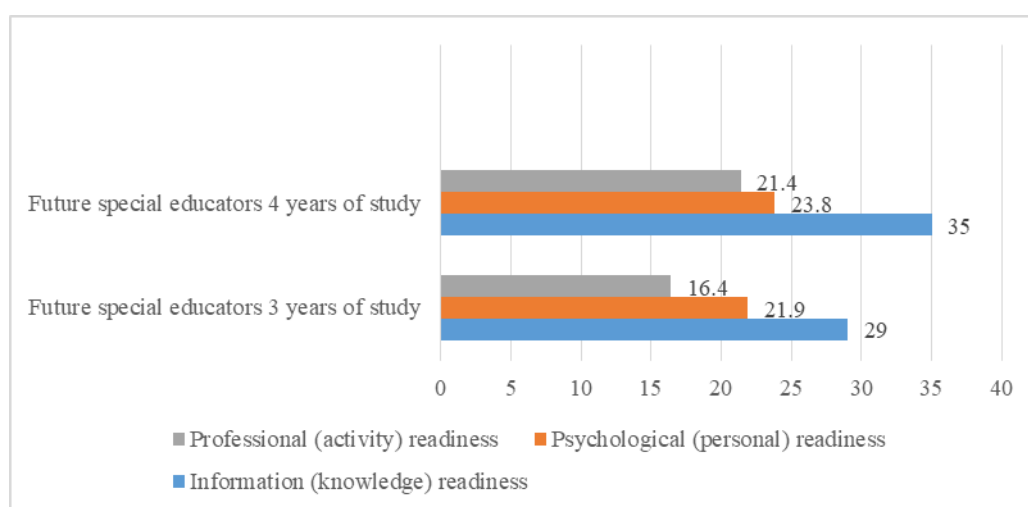


Figure 1. Results of the survey of future special educators, %

To check the reliability of the questionnaire on the types of readiness of future special educators, an analysis of internal consistency was conducted using Cronbach's Alpha coefficient. The results are presented in the **Table 1**:

Scale	Cronbach's alpha	Interpretation
Knowledge readiness (Q1–Q7)	0.78	Good consistency
Psychological readiness (Q8–Q13)	0.71	Acceptable consistency
Activity readiness (Q14–Q20)	0.69	On the edge of acceptable levels
General Questionnaire (Q1–Q20)	0.82	High consistency

All questionnaire scales demonstrate acceptable reliability, allowing them to be used to assess the readiness of future teachers to work with children with special educational needs. The knowledge scale has the highest reliability, while the activity scale has the lowest, indicating the need to strengthen students' practice-oriented training.

The data show that the levels of all types of readiness of future special educators for professional activity are at approximately the same low level. At the same time, information (knowledge) readiness is at a higher level. This allows us to conclude that in the training of future special educators in universities, the main

emphasis is placed on students mastering a set of knowledge, and much less attention is paid to other types of readiness. Accordingly, graduates of pedagogical universities in the Republic of Kazakhstan not only do not have sufficient knowledge to fully teach children with special educational needs, but are also psychologically unprepared for this, and do not have sufficient practical (activity-based) experience even within the framework of educational, quasi-professional activities, for example, within the framework of project implementation, problem-based, contextual learning, as well as analysis of specific cases. Survey materials and analysis of literary data by Sardarova Zh., Kismetova G.N., and Gaurieva G.M. [24-27] emphasize that psychological readiness for the implementation of inclusive education of future special educators is a key barrier to ensuring the psychological well-being of students with special educational needs:

Here, we can note the lack of motivation and the value component, as many future special educators experience a conflict between their theoretical knowledge of the importance of inclusion and their personal attitudes, which reduces their readiness to implement it in practice. This area of importance is influenced by public opinion and society's reluctance to accept children with special educational needs. Here, the issue of psychological unpreparedness intersects with the development of an inclusive culture and inclusive thinking.

Future special educators experience a lack of self-confidence, and they lack Experience working with children with special educational needs (SEN), which causes anxiety and fear of making mistakes, leading to avoidance of inclusive practices. Incidentally, teaching internships are organized in specialized educational institutions where the student body consists exclusively of children with SEN.

Future special educators are still in the developmental stage and often doubt their ability to cope with professional challenges, a feature the authors associate with the instability of their professional identity.

The high psychological burden associated with the perception of the complexity of inclusive education can provoke stress and reduce motivation, thereby leading to emotional tension. And even taking into account the fact that, according to the curriculum, they study the subject "Inclusive Education," in practice, this is not enough to implement the components of readiness and create psychological well-being for students.

In combination, this creates weak preconditions for the psychological well-being of students with special educational needs, namely, feelings of social insulation and Otherness. In such circumstances, children with special educational needs (SEN) often experience a lack of acceptance from peers and classmates, which lowers their self-esteem. Schoolchildren often exhibit high sensitivity to failure, fears associated with misunderstanding the material, and social rejection. All of this contributes to a decrease in academic motivation, and they develop learning difficulties, which are compounded by psychological and cognitive developmental challenges that can lead to loss of interest and decreased self-confidence. Failure to accept a child with SEN as a full member of society with the same rights as other children leads to dependence on adult support. Without sustainable pedagogical and psychological support, children experience difficulties in self-regulation and social adaptation, the concept of the zone of proximal and actual development is distorted, behavioral reactions begin, and the degree of independence in educational activities decreases.

Thus, these two aspects together create a double challenge: future special educators are not always psychologically prepared to implement inclusive approaches, and students with special educational needs face the risk of disruption to their psychological well-being if a supportive atmosphere is not created and ensured.

In the current context of inclusive education, a contradiction is emerging between the social demand for the training of competent teachers and their actual level of psychological readiness to implement inclusive education. Future specialists, during their professional development, often exhibit unstable motivation, a lack of self-confidence, emotional stress, and limited practical experience interacting with children with special educational needs. At the same time, students with special educational needs themselves face risks of impaired psychological well-being, manifested in social isolation, decreased self-esteem, emotional instability, and loss of motivation for learning. Thus, the psychological unpreparedness of future special education teachers and the problems of psychological well-being of students

with special educational needs are interrelated phenomena that cannot be considered in isolation.

The scientific novelty of this approach lies in its substantiation of the need to develop an integrative model that ensures the unity of two key components: the psychological readiness of future teachers for inclusion and the preservation of the psychological well-being of students with special educational needs. This model will not only improve the effectiveness of teacher training but also create an educational environment conducive to the personal development, social adaptation, and successful integration of children with special educational needs. The relevance of this research is determined by society's increasing demands for the quality of inclusive education and the need for special educators with a high degree of professional and psychological readiness to work in a diverse environment.

Results and Discussion

As noted above, let us consider the concepts of "modeling" and "model" in more detail. It is immediately necessary to consider the concept of "modeling" and "model", and note that one cannot allow the confusion of modeling as the construction of a model of an object (its mental image) and modeling as a way of knowing an object "on its model", that is, knowing the model of an object, and through it – the object itself. Accordingly, as Shimko Z.I. asserts, the meanings of the term "model" (fr. *modele* < it. *modello* < lat. *Modulus* - measure, sample) are correlated with two considered meanings of the word "modeling" [28-33]. As noted above, the model expresses an approximate, limited representation of the structure and functioning of a particular object of study [34-36] and, at the same time, should reflect the connections between elements, the relationships between them in the process.

The design of an integrative model that ensures the relationship between the psychological readiness of future teachers to implement inclusive education and the psychological well-being of students with special educational needs was based on modern concepts of organizing the educational environment and managing pedagogical processes.

The "Modern Learning Environments" model was used as a methodological guideline, in which the educational space is viewed as a dynamic environment aimed at personal development, socialization, and psychological well-being of students. The principles of this approach allow for the design of an educational environment that takes into account the diversity of children's needs and creates conditions for equal access to learning [37-40].

The second foundation was a model for making managerial and pedagogical decisions aimed at ensuring the psychological well-being of participants in the educational process. Its application allows us to consider pedagogical activity and management actions as a system of measures that ensure the preservation of mental health, the prevention of emotional distress, and the development of students' personal potential [41, 42].

The integration of these models provides a methodological basis for developing a comprehensive system in which the psychological readiness of future special education teachers for inclusion is correlated with the quality of the educational environment, and the educational environment itself becomes a prerequisite for strengthening the psychological well-being of

children with special educational needs. Thus, this study creates an integrative model that ensures the unity of two key components—the professional and psychological readiness of teachers and the psychological well-being of students with special educational needs (**Figure 2**).

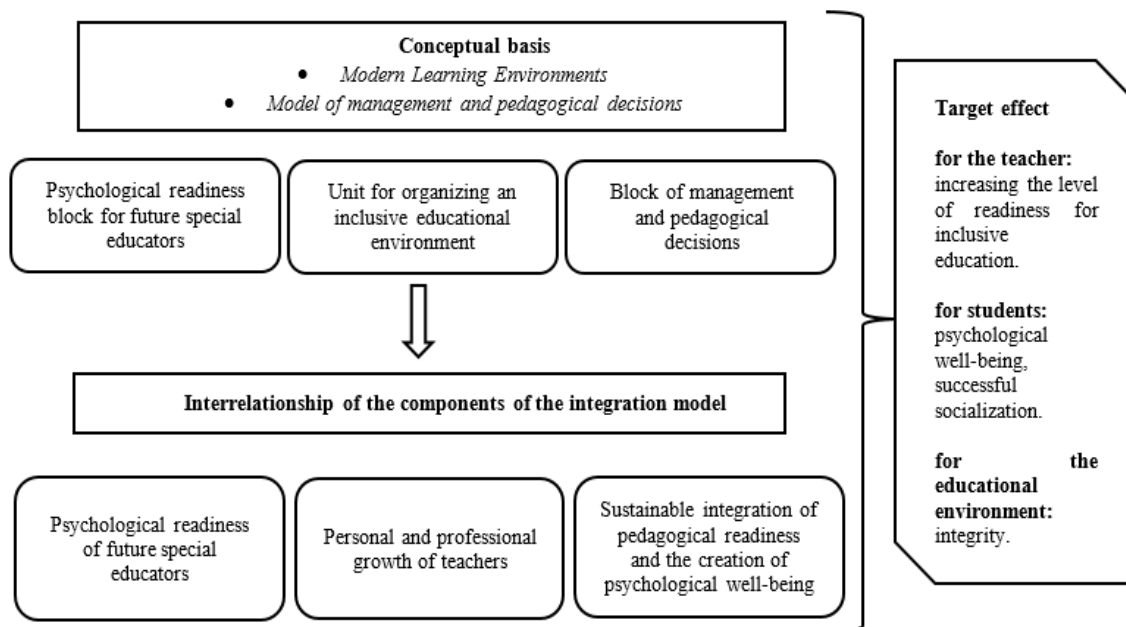


Figure 2. An integrative model of the readiness of special educators and the psychological well-being of students with special educational needs

The conceptual basis of the model consists of Modern Learning Environments, where the emphasis will be on organizing a flexible, dynamic, and adaptive inclusive educational environment focused on the personal development, social inclusion, and psychological well-being of all students, including those with special educational needs. This type of organization is established under the following conditions:

1. Taking into account the individual characteristics of students;
2. Creation of conditions that help reduce anxiety and increase emotional comfort at school.
3. Development of the professional inclusive competence of teachers;
4. Mastering and application by teachers of motivational design of educational programs and innovative technologies;
5. Involvement of parents in the educational process.
6. Improving the culture of communication and developing positive communication skills of participants in the educational process.
7. Optimization of educational space;
8. Use of digital technologies for psychological and pedagogical support;
9. A system for caring for the psychological well-being of teachers;
10. Development of reflection and self-regulation skills among participants in the educational process.

11. Monitoring and evaluation of the effectiveness of the educational environment;
12. Training teachers in reflective practices and skills for working with the emotional state of students;
13. Improving the quality of professional training of teaching staff for the educational environment.

The next foundation is oriented towards a model of management and pedagogical decisions, in the activities of which the emphasis is on the systemic regulation of educational processes with priority given to mental health, prevention of maladaptation, and development of the personal potential of each student. This will allow us to create an algorithm for making management and pedagogical decisions based on the data obtained, for teachers and heads of educational organizations. Informational and educational, pedagogical, emotional-psychological, inclusive, reflective types of activities and various forms of their implementation, such as surveys, seminars, workshops, case studies, game training, tutoring, interpretation, round tables, online communications, moderation, coaching, etc.

The structure of the proposed model consists of three blocks: psychological readiness of future special educators, organization of an inclusive educational environment, management and pedagogical decisions.

What do these blocks include?

Block of psychological readiness of future special educators:

- Formation of value attitudes towards the acceptance of diversity and inclusion.
- Development of competencies for working with children with special educational needs (psychological, pedagogical, communicative, adaptive).
- Reducing the level of professional anxiety, strengthening confidence, and resistance to stress.
- Experience of practical interaction with students with special educational needs in the context of pedagogical practice.

Block for organizing an inclusive educational environment:

- Flexible architecture of the educational process (variability of methods and forms).
- Principles of accessibility and equal participation.
- Using digital and interactive technologies to personalize learning.
- Creating an atmosphere of support and collaboration in the classroom.

Block of management and pedagogical decisions:

- Inclusion of psychological well-being criteria in school and university management strategies.
- Supporting special educators through supervision, coaching, and burnout prevention.
- Systematic support for students with special educational needs (by a team of psychological and pedagogical support).
- Interacting with the family to ensure the integrity of the educational process.

The interrelation of the components of the integrative model ensures psychological readiness for future special educators, where an inclusive educational environment is a factor in its successful implementation. It is aimed at enhancing the personal and professional growth of the teacher, where the risks of emotional distress will be minimized, and at the same time, creating a supportive psychological well-being of students. Management and pedagogical decisions in this tandem reinforce the systemic nature of the system, ensuring the sustainable integration of pedagogical readiness and psychological security of all participants in the educational process.

The target effect of the integrative model is manifested at several levels. Firstly, the implementation of the model enhances the psychological and professional readiness of future special education teachers to work in an inclusive education environment. This is reflected in the development of strong values embracing diversity, the development of competencies necessary for supporting children with special educational needs, and enhanced professional confidence and resilience. Thus, special education teachers become capable of not only effectively organizing the educational process but also maintaining their own psychological well-being.

Secondly, for students with special educational needs, the integrative model helps create conditions for maintaining and strengthening their psychological health. This results in

improved social adaptation and successful integration into the community, increased academic motivation, reduced feelings of isolation, and the development of positive self-esteem and self-confidence. This leads to more harmonious personal development and the fulfillment of individual potential.

Thirdly, for the inclusive educational environment as a whole, the integrative model ensures the formation of a coherent system focused on personal development, mutual acceptance, and support for all participants in the educational process. Such an environment fosters conditions for equal participation, positive interaction, and psychological safety, which strengthens the effectiveness of the educational system and makes inclusive education a sustainable practice.

In this perspective, the Upgrade course "Inclusive education: modern practices for teachers" [43] was organized for final-year undergraduate students. It is designed to develop in future teaching staff, including special educators, the professional competencies necessary for the implementation of inclusive education principles in educational organizations of various types. The relevance of the course is determined by the modern requirements of state educational standards, as well as the social necessity of creating an educational environment accessible to students with special educational needs, including those with disabilities. In the context of the modernization of education in Kazakhstan, special attention is paid to issues of social integration and equal opportunities for all children to receive a quality education, regardless of their disabilities. The purpose of this course is to develop professional competencies in the field of inclusive education for future special educators in accordance with the professional standard "Teacher", approved by the order of the Acting Minister of Education of the Republic of Kazakhstan dated December 15, 2022, No. 500. The course is multi-tasking, namely :

1. To familiarize students with modern approaches and the regulatory framework for inclusive education;
2. To develop readiness to design and implement inclusive educational practices within their subject area;
3. To teach methods of adapting the content of training, taking into account the individual needs of students with special educational needs.
4. To develop interaction skills in an inclusive team: teacher-psychologist-specialist-parent-student.

In the context of the expected results, future special educators understand the legal, pedagogical and ethical foundations of inclusion; have basic approaches to teaching children with special educational needs; can adapt the lesson in their subject area, taking into account the needs of students with special educational needs; ready to cooperate with colleagues and parents in an inclusive environment; implement elements of universal design in their practice.

The "Inclusive Education: Modern Practices for Teachers" upgrade course is offered online in accordance with the course's curriculum and consists of 36 academic hours. In this case, 6 hours are allocated for lectures (17% of the total volume), while

practice-oriented forms of classes (master classes and practical classes) make up 17 hours (48%), and 12 hours (33% of the total volume) are allocated for independent work. One hour is spent completing the final online test via a Google Forms link. This distribution reflects the practical focus of the course's educational program.

In the online learning format, webinars and independent work of future special educators, in which they work with recommended sources, theoretical materials, and practical assignments, are distributed equally (50/50).

Conclusion

The study showed that the successful implementation of inclusive education is impossible without a comprehensive approach that ensures the connection between the psychological readiness of future special educators and the psychological well-being of students with special educational needs. An analysis of psychological and pedagogical literature, modern models of organizing the educational environment ("Modern Learning Environments"), and systems for managing pedagogical decisions made it possible to substantiate the need to develop an integrated model reflecting the unity of the professional and psychological training of a teacher and the conditions that create a favorable educational environment.

The proposed integrative model ensures the integrity of the "special educator – educational environment – student" system and allows us to consider the special educator's readiness for inclusion not as an isolated characteristic, but as a factor directly influencing the personal development, successful socialization, and psychological well-being of children with special educational needs. Its practical significance lies in its potential use in training future specialists, designing educational programs, and organizing inclusive spaces focused on the acceptance, support, and development of every student, including those with special educational needs.

Thus, the implementation of this model contributes to improving the quality of inclusive education, strengthening the professional confidence of teachers, and creating conditions for psychological safety and personal growth in children, which confirms its relevance and potential for further scientific research and practice.

An integrated model of future special educators' readiness to promote students' psychological well-being in inclusive education reflects the current development of pedagogical science. It not only integrates theoretical approaches and practical guidelines but also opens up opportunities for the development of innovative educational practices that take into account the interdependence of special educator professional training and the child's psychological well-being. Further development of the model involves its adaptation in specialist training programs, expansion of its methodological tools, and empirical research aimed at identifying the most effective ways to support both teachers and students with special educational needs.

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