






THE EFFECTIVENESS OF THE TRAINING MODEL OF THE FUTURE TEACHER IN CONDITIONS OF INCLUSIVE EDUCATION

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ABSTRACT

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This study aimed at understanding the problems of training teachers who taught children with health disabilities. For this study, students from two universities located in Semey city of Republic of Kazakhstan participated. A few components like motivation, cognition, creativity, and activity, which fulfilled the conditions of inclusive education and were related to future teacher's readiness to work with students of disabilities, were defined and disclosed. Four levels of inclusive competence of students of pedagogical specialties were identified: low, average, above average, and high. In addition, the study also defined the requirements for future teachers working in the conditions of inclusive education. Eventually, a structural and content model of preparing future teacher-psychologist for professional adaptation in an inclusive educational environment was developed and tested. The model included the purpose, approaches, principles, and contained components: target, content, procedural, and evaluative-effective. In the course of experimental work, the effectiveness of the model of preparing future teachers to professional adaptation in inclusive education was proved. The results of the pedagogical experiment indicated the feasibility of introducing the proposed model of preparing a future teacher to professional adaptation in an inclusive education. The study suggests to implement the structural content model in real-life educational setting, to train the teachers preparing for inclusive education. Its implications are for educationists, administrators and teachers who are directly connected with inclusive education

Contribution/Originality: This study is one of very few studies which have investigated the theoretical and methodological foundations and developed the methodology for preparing a future teacher-psychologist for professional adaptation in the inclusive educational environment. Such teacher-psychologist would be professionally trained to work with children with mental retardation in an inclusive educational environment.

1. INTRODUCTION

Education reforms in the Republic of Kazakhstan increasingly have taken a humanistic focus. The education of people with disabilities occupy a special place in the modern education system (Makoelle & Burmistrova, 2021). In recent decades, there have been stable negative trends in the health of children of all age groups. This deterioration of health is most pronounced among adolescents - between the ages of 10 and 17 years. Moreover, the act of positive integration of students with disabilities into society is a difficult stage of socialization for them (Makoelle, 2020; Movkebayeva, Oralkanova, Mazhinov, Beisenova, & Belenko, 2016). Despite the integration processes in the educational sphere, the problem of teaching children with disabilities remains complex, though it still remains a priority sector. The introduction of inclusive education, as a part of general education, implies access to education for all, particularly adapting to the different needs of children with disabilities. While in the complex field of vocational education, the key challenge is to prepare and train future teachers to work with such students and adapt them to inclusive education (Mitchell, 2015; Oralkanova, Kuanzhanova, Shaumen, Zhunusbekova, & Imanchiyev, 2014).

Education in modern conditions also requires training of competitive specialists with a high level of knowledge and skills in the field of inclusive education, as well as creative potential (Walsh & Jones, 2004). The teacher should not only involve students in creative activities but also teach them to develop their own creative potential. The teacher's desire to find a dialogue with each student is the basis of professional success. An important factor in adapting teachers to work in inclusive education is the compliance of their personal qualities with the requirements of this work with students (Brownell, Smith, Crockett, & Griffin, 2012; Iskakova, 2013; Salend & Garrick, 1999).

In its historical evolution, inclusive education also aimed at ensuring equal access to a particular type of education and creating the necessary conditions for success in education for all children without exception, regardless of their individual characteristics, previous educational achievements, native language, culture, social and economic status of parents, mental and physical capabilities (Ilisko et al., 2019). It included several features including

- Creating a unified educational environment for children with different starting opportunities.
- Development of potential opportunities for children with special psychophysical development in joint activities with healthy peers.
- Organization of a system of effective psychological-pedagogical support for the process of inclusive education through the interaction of diagnostic-advisory, correctional-developmental, therapeutic-preventive, social-labor activities.
- Children's development of general education programs in accordance with the state educational curriculum.
- Correction of impaired processes and functions, shortcomings of emotional and personal development.
- Formation of an adequate attitude to the problems of people with disabilities among all participants of the educational process.
- Protection and strengthening of children's physical, neuropsychiatric health.
- Providing advice to families raising children with special educational needs, including them in the teaching process.
- Successful socialization of students.

Inclusion thus covers the deep social processes of the school which creates a moral, material, and pedagogical environment, adapted to the educational needs of any child. Such an environment can be created only in close cooperation with parents, in a cohesive team interaction of all participants in the educational process (Kauliņa, Voita, Trubina, & Voits, 2016). In such an environment, people should work, ready to change with the child and for the sake of the child, not only "special", but also the most ordinary. The principle of inclusive education is that the diversity of needs of students with disabilities should correspond to the educational environment that is the least limiting and most inclusive. This principle means that:

1. All children must be included in the educational and social life of the school where they live.
2. The goal of an inclusive school is to build a system that meets the needs of everyone.
3. In inclusive schools, all children, not just children with disabilities, are provided with support that allows them to be successful, feel safe and relevant.

Inclusive education, which is intensively included in the practice of modern schools, poses many complex questions and new challenges. The foreign practice of inclusion in education provides a rich experience to teachers as, in western countries, inclusive education is much higher and theoretically better developed (Opertti, Walker, & Zhang, 2014; Schuelka & Johnstone, 2012). The difference lies in taking a great interest in preparing teachers for inclusive education and improve the pre-requisite conditions of inclusive education (Ferguson, Desjarlais, & Meyer, 2000; Materechera, 2020; Miller et al., 2020; Miškolci, Magnússon, & Nilholm, 2020; Moberg, Muta, Korenaga, Kuorelahti, & Savolainen, 2020).

The current study is an attempt to investigate the extent to which the current educationists and academicians take interest in preparing teachers for inclusive education and provide the pre-requisite conditions to facilitate of inclusive education.

2. RESEARCH OBJECTIVES

The primary purpose of this study was to theoretically substantiate and experimentally test the effectiveness of the model of preparing future teachers for professional adaptation with students in inclusive education. In accordance with this purpose, the following research *objectives* were defined:

- To conduct a theoretical analysis of the current state of inclusive education.
- To identify the essence of the concept of “readiness of future teachers to professional adaptation in inclusive education” and its components.
- To develop the model of training future teachers for professional adaptation in terms of inclusive education.
- To determine the levels and develop criteria for the formation of components of the future teacher's readiness for professional adaptation in inclusive education.
- To experimentally test the effectiveness of the structural and content model of preparing future teachers for professional adaptation in inclusive education.

3. LITERATURE REVIEW

i. The Kazakhstan scenario of inclusive education

In the Republic of Kazakhstan, since 2000, new directions of educational policy have been formed in relation to children with special needs, and an active search for effective ways of socialization, upbringing, education, social support and adaptation of children is being conducted. In 2002, for the first time in the post-Soviet era, a Law of the Republic of Kazakhstan was enforced that dealt with “social and medical-pedagogical correctional support for children with disabilities”. This Law established a new inclusive approach in the form of the principle of protecting the rights of children of this category, reflecting not only special knowledge, but also a different approach to their role in society.

After the signing of the “Convention on the Protection of the Rights of the Child” and the “Optional Protocol” in 2008, Kazakhstan committed to undertake appropriate measures to ensure the rights of persons with disabilities in matters of labor, justice, education, healthcare, and accessibility of mobility. The new schools set specific strategic goals for the teaching community. These new schools were for everyone irrespective of physical disabilities; in fact, these schools ensured the successful socialization of children with disabilities or of those children left without parental care and were in difficult situations.

Inclusive education, as it evolved in Kazakhstan, assumed that the diversity of needs of students with disabilities should correspond to a continuum of services, including a favorable educational environment. This principle meant that all children should be included from the very beginning in the educational and social life of the school where they lived. An inclusive school largely aimed at educational achievements different from those that are most often recognized in a regular education system. The goal of an inclusive school was to build a system that met the needs of all children, not just of those with disabilities. An inclusive school provided support that enabled all children to achieve success, feel safe and value being together in a team. The goal of such a school was therefore to give all students the opportunity to have the most complete social life, the most active participants in the team, local community, thereby ensuring the most complete interaction, help each other as members of the community (Ferguson, Meyer, Jeanchild, Juniper, & Zingo, 2007; McLeskey, Waldron, Spooner, & Algozzine, 2014). This value imperative clearly showed that all members of the school community and society are connected and that students not only interact with each other in the teaching process, but also develop when they make joint decisions about managing processes in the classroom.

In the Republic of Kazakhstan, inclusive education and special training for teachers and psychologists working in this system, are still not fully developed. Similarly, the foreign practices of inclusion in education have a rich experience and legislative consolidation, while the Kazakhstani's experience is just beginning to develop. The study of the conceptual foundations of this industry, and educational, scientific, methodological and practical mechanisms for its implementation, are urgent issues on the agenda of educationists. Various issues of inclusive education have been discussed in previous studies in the context of Republic of Kazakhstan such as psychological and pedagogical support; legal framework for inclusive education; the issue of training teachers in inclusive education; scientific-methodological aspects of organizational-pedagogical state of connecting children with disabilities to the educational process; professional training of adults in the field of inclusive education; psychological foundations of children with disabilities, and features and basics of teacher training in the conditions of inclusive education (Allan & Omarova, 2020; Movkebayeva. et al., 2020; Oralkanova et al., 2014; Ospanova, Borisova, Mironova, & Ju, 2020).

ii. *Inclusive education*

Inclusive education is based on the ideology that excludes any discrimination against children, which ensures equal treatment for all people but creates special conditions for children with special educational needs. Inclusive education can support these children in learning and achieving success, which will give them chances and opportunities for a better life (Helmer, Kasa, Somerton, Makoelle, & Hernández-Torrano, 2020). Inclusive education is a term used to describe the process of teaching children with special needs in general education (mass) schools (Mag, Sinfield, & Burns, 2017). Inclusive education seeks to develop a methodology that targets children and recognizes that all children are individuals with different learning needs. Inclusive education tries to develop an approach to teaching and learning that is more flexible to meet different learning needs. If teaching becomes more effective as a result of the changes introduced by inclusive education, then all children will benefit (not just children with special needs) (Moriña, Perera, & Carballo, 2020).

Inclusion is thus an approach and philosophy which assumes that all students (both with and without disabilities) get equal opportunities, socially and academically. Inclusion is not just about getting all children "in a bunch"; on the contrary, it helps to ensure that each student feels accepted, that their abilities and needs are evaluated. Inclusion is an approach that takes into account the diversity of students, where curricula and goals are tailored to their abilities and needs. In this process, the role of teachers and special educators is important, who bring their experience and knowledge to ensure that every child can learn with the greatest benefit (Krasnopevtseva, Filchenkova, & Vinokurova, 2020; Sharma, 2015).

In a number of countries around the world, since the 1970s, several regulations have been developed and implemented to promote the educational opportunities of persons with disabilities. For instance, United States and

European nations have adopted several approaches including expanding access to education, widening participation, and mainstreaming. These approaches assume that students with disabilities communicate with their peers on holidays, in various leisure programs; they are included in mass school classes, and opportunities for social contacts are expanded to achieve educational goals. This means bringing the needs of children with mental and physical disabilities into line with an education system that remains largely unchanged, and not adapted for them. Thus, students with disabilities attend mass school, but do not necessarily study in the same classes as all other children. "Inclusion," therefore, is a universal term which is interpreted as a reform system of schools and the redevelopment of educational facilities in order to meet the needs of all children without exception (Imaniah & Fitria, 2018).

iii. *Readiness and willingness to participate in inclusion*

There are many different approaches to the concept of "readiness" and its interpretations, which are determined both by the theoretical preferences of the authors and the specifics of the tasks they solved in their research (Zulfija, Indira, & Elmira, 2013). In all this diversity, we can distinguish two approaches or levels for the readiness of specialists for professional activity: *functional and personal*. In line with the *functional approach*, readiness is considered in connection with functional systems, the reflection of the reaction of which are psychophysiological states (Kovalev, 1970). Readiness is considered as a mental state, an integral manifestation of the personality, occupying an intermediate position between mental processes and personality properties and ensuring the success of professional tasks, allowing to make independent decisions, create a creative atmosphere.

Secondly, within the framework of the *personal (integrative) approach*, readiness for activity is considered as a manifestation of individual, personal and subjective characteristics of a person in their integrity, ensuring the success of a person's professional activity. Readiness for activity is also considered as a complex dynamic system of intellectual, emotional, motivational and volitional aspects of the human psyche. Practical readiness of the future teacher should be considered as a state of an integral subject (student), which includes conscious and unconscious attitudes, models of probable behavior, determining the optimal ways of activity, evaluating their capabilities in accordance with the upcoming difficulties and the need to achieve a certain result in their profession (Haigh, Ell, & Mackisack, 2013).

A society's willingness to change to meet the other is an important prerequisite for successful inclusion, and it must be cultivated. This readiness has different aspects: psychological, cultural, social, political, economic and it involves different stages in its development. Not everyone else can be equally accepted by society and even should be accepted by it. Openness to the other should not violate the basic security of the individual, one of which is the preservation of one's own identity, and the ability to identify an individual with a reference cultural group (Carroll, Forlin, & Jobling, 2003). Participation in inclusion implies a conscious acceptance of the possibility of changing one's life strategy, consent to the revision of one's own identity. In the absence of such acceptance, it is natural to expect that the intrusion of the other will be perceived as hostile or destructive, that it may meet with resistance. For inclusion to be accepted by all its participants, they must be aware that this process is for their common good and follow the principle of voluntariness (Rouse, 2008).

Readiness of a specialist - in the narrow sense -- is the state of mobilization of all psychophysiological systems of a person that ensure the effective performance of certain actions, and in the broad sense as a set of professionally-determined requirements for a person has traditionally been most actively studied by military and sports psychology, as well as labor psychology (Baimenova, Bekova, & Saule, 2015). The main feature of readiness for professional activity is its integrative character, which is manifested in the order of internal structures, consistency of the main components of the professional's personality, in the stability and continuity of their functioning, i.e., professional readiness has signs indicating psychological unity, integrity of the professional's personality, contributing to productive activity.

iv. Training of teachers for inclusive education

Exploring the problem of the personal approach of professional training, Ippolitova, Kolesnikov, & Sokolova (2006) identified three interrelated components of readiness as professional activities of a future teacher: personality component, cognitive component, and praxiological component. The personality component characterized the degree of moral-pedagogical readiness of the teacher to professional activities, reflected the degree of formation of value orientations, interest in the profession, the level of motivation development for teaching activities; second, the cognitive component reflected the teacher's awareness of the essence and content of pedagogical activity, emphasizing the general pedagogical, methodological, and special-subject knowledge necessary for effective professional and pedagogical activities; third, the praxiological component characterizes professional skills that are necessary for the teacher to implement the functions of pedagogical activity and ensure its effectiveness

However, professional readiness, being a new formation of the personality of a university student, it characterizes his subjective attitude to pedagogical activity, acts as a reflection of his ability to successfully implement the educational process at school and is characterized by the presence of certain competencies, motivation, and personal characteristics of the subject. Professional readiness of a teacher, likewise, is an essential prerequisite for purposefulness and effectiveness of activities. The high level of its formation helps a young specialist to perform his professional duties with high quality, apply knowledge, use experience, and adjust professional actions in accordance with the prevailing pedagogical situations. Professional readiness of a teacher synthesizes his socio-political, psychological, pedagogical, general scientific, moral and ethical, methodological and physical readiness (Kulikova & Pronina, 2018).

The primary and most important stage of preparing the educational system for the implementation of the inclusion process is the stage of psychological and value changes and the level of professional competence of its trained specialists. The scientific literature has raised the question of the readiness of future professionals. Truly speaking, higher professional education is faced with the task of building a team of trained specialists who can quickly adapt to the constantly changing modern requirements of the educational process, and are steadily focused on the competent solution of professional tasks. They are able to carry out self-regulation and self-development within the framework of this professional activity, and also have a positive motivation for teaching. The readiness of a teacher for professional activity, therefore, is understood as a complex dynamic education of a person that allows a certain subject to successfully carry out pedagogical activities (Duray-Novakova, 1983).

The above discussion of the previous literature thus builds up the readiness structure for this research study. The approach taken by most authors have identified readiness components which distinguished following structural components of readiness: motivational, orientation, operational, volitional and evaluative components (Dyachenko, 1978). The relevance of these components is determined by the social order of society to prepare teachers to work with students in inclusive education who have certain professional and personal qualities necessary for this work, as well as the presence of unresolved contradictions between the need to include students with disabilities in the general school environment and the lack of qualified teachers to implement inclusive education. There is also a marked gap in the training requirements of future teachers to work in inclusive education and insufficient development of theoretical, methodological and practical approaches enabling the growth of teaching students.

Thus, this study was inspired by the social significance of the issue and its relevance to society and also to fill up the research gap of addressing to the psychological and pedagogical problems of preparing teachers for professional adaptation in an inclusive educational environment.

4. PROBLEM STATEMENT

Inclusive education, which is intensively included in the practice of modern schools, poses many complex questions and new challenges. Even at the first stages of the development of inclusive education, the problem of unpreparedness of mass school teachers (professional, psychological and methodological) to work with children

with special educational needs is acute. There is a lack of professional competences of teachers to work in an inclusive environment, the presence of psychological barriers and professional stereotypes of teachers. Moreover, information awareness of the teacher about the main provisions of inclusive education is the basis for his professional adaptation. The main concerns of teachers of mass schools are related to the understanding of their own lack of knowledge in the field of correctional pedagogy, with ignorance of forms and methods in working with children with developmental disabilities.

There are several issues that act as psychological "barriers" such as fear of the unknown, fear of harm of inclusion for the rest of the participants of the process, negative attitudes and prejudices, professional uncertainty of the teacher, reluctance to change, and psychological unpreparedness to work with "special" children (Campbell, Gilmore, & Cuskelly, 2003). These are serious challenges not only to the psychological community of education, but also to methodological services, and most importantly, to the heads of educational institutions that implement inclusive principles. Teachers of general education require specialized comprehensive assistance from specialists in the field of correctional pedagogy, special and pedagogical psychology, in understanding and implementing approaches to individualizing the education of children with special educational needs, which primarily fall into the category of students with disabilities (Ferguson 2008; Sakarneh & Nair, 2004). But the most important thing that mass school teachers do not have the required training to work with children with different learning opportunities and take this diversity into account in their pedagogical approach as well.

The ideology of inclusion is based on the idea of an inclusive society. It means changing society and its institutions in a way that encourages the inclusion of another (a person of a different race, religion, culture, person with disabilities). Moreover, it is supposed to change institutions so that this inclusion contributes to the interests of all members of society, the growth of their ability to live independently (including people with disabilities), ensuring equality of their rights, etc. (Ashman & Merrotsy, 2009; Semenov & Popova, 2011). If inclusion is not ensured by a corresponding change in institutions, it may result in a deepening of social inadaptation of people with disabilities and an increase in tolerance for them on the part of those who do not have such restrictions. It is important that the practice of inclusion does not rely on the desire or, even more so, the compulsion to "be like everyone else", since in this case it conflicts with the right to "be yourself".

5. RESEARCH METHODS

A sample of 213 students of specialty 5B010300 "Pedagogy and Psychology" was selected for this study. This sample was divided into two groups: a control group of 106 students from Shakarim University and an experimental (research) group of 107 students from the Kazakh Innovative Humanitarian Law University in Semey city. The students in the control group were taught in the traditional way while the experimental group students were taught by implementing the developed model of preparation of the future teacher to work with students with disabilities in conditions of inclusive education. For the purpose of this study, readiness of the future teacher to professional adaptation in inclusive education was defined as a set of knowledge and ideas about the characteristics of students with disabilities, possession of methods and techniques of working with these students in an inclusive education, as well as the formation of certain personal qualities that provide a stable motivation for this activity.

The components of future teachers' readiness to professional adaptation in inclusive education were also identified as *motivational, cognitive, creative, and activity-based*. The first component of *motivational* was defined as a set of persistent motives to work in inclusive education, focus on the implementation of an effective teaching process, recognition of each student as a subject of educational activity, the formation of internal readiness for a positive perception of students with disabilities. The motivational sphere of a person is a set of persistent motives (subjective reasons for a particular behavior) that have a certain hierarchy and express the orientation of the person. The second component of *cognitive* represents a system of knowledge and ideas about the problem of disability, the features of mental and physical development of people with disabilities and the features of creating the pedagogical

process with such students. This component also includes professional and applied knowledge of future teachers on the prevention of crisis and extreme situations, the formation of a favorable psychological climate for the life of subjects of the pedagogical process.

The creative component reflects the creative activity and personal characteristics of the teacher, allowing to create new material and spiritual values, as well as to develop the creative potential of students with disabilities, guided by their capabilities. *The activity component* of the future teacher's readiness to work with students in inclusive education consists of methods and techniques for implementing professional and pedagogical knowledge in working with people with disabilities and involves the formation of appropriate professional competencies for future teachers.

In order to determine the level of readiness of future teachers to professional adaptation with students in inclusive education the following criteria were developed:

- Level 4, the highest level was reached when the component was formed with 76 to 100%.
- Level 3, the above average level is achieved when the component was formed with 51 to 75%.
- Level 2, the average level was reached when component was formed with 26 to 50%.
- Level 1, the low level was achieved when the component was formed with 0 to 25%.

A future teacher is considered to have reached the highest fourth level if at least three of the four components are formed at the 4th highest level and the rest at the third. If at least one component is at the second or first level, then the teacher can only be assigned to the second average level. The third above average level includes teachers who have most of the components formed at 3 above average level, and the rest at the highest level. If two or more components are formed at the first low level, the teacher is only at the first level. The second average level includes future teachers who have most of the components formed at the 2nd average level.

6. FINDINGS AND DISCUSSION

Modeling of the pedagogical process is one of the most important components of modern pedagogy and psychology, as the importance of designing and implementing new innovative technologies that correspond to advanced theoretical ideas of inclusive education increases (Khakimovna, 2021). To build a model for preparing a future teacher for professional adaptation with students in inclusive education, it is necessary to refer to the basic concepts of this process.

The primary purpose of creating a model, for preparing a modern competent teacher to work in an inclusive education environment, was to form a framework that embodies the abstract structure and the real projected process, and traced the development of the process under study in the appropriate scheme. Such a teacher is also able to adapt his subject for each student, use modern developments in science and technology to effectively build the learning process. The theoretical and methodological basis for the development of such a model for preparing future teachers for professional adaptation in inclusive education was the use of holistic, *personal-oriented*, *activity-based* and *differentiated* approaches, since they correspond to the goals and objectives of the study.

A holistic approach is the most general and broad way to cover the phenomena we know. It is the internal processes, the internal activity of the subjects of pedagogical activity, and is the most important approach for a teacher-researcher. A holistic approach focuses on the selection of integrative invariant system-forming relationships and relationships in the educational system and the developing personality; on the study and formation of what is stable in the system, and what is variable, what is main, and what is secondary. It involves finding out the contribution of individual components-processes to the development of the individual as a system whole. In this respect, it is very closely related to the personal-oriented approach (Stern, 2005).

The personal-oriented approach in pedagogy follows from the holistic. It asserts ideas about the social, active and creative essence of the individual. The idea of the socially active essence of the individual, which finds his I in the process of joint activity and communication, in the process of cooperation with the world of people and cultural products. It draws attention to the personal meanings and semantic attitudes generated in the course of a person's

life in society, regulating activities and actions in different problem and conflict situations of moral choice (Mynbayeva, Sadvakassova, & Akshalova, 2017).

The personal-oriented approach in pedagogy considers a person as an absolute value, who implies a humane attitude to the developing personality in the dyad "subject-student, subject-teacher", built on the principles of cooperation and freedom of choice of the student's educational content in order to meet educational, spiritual and life needs. The personal-oriented approach, regardless of the discussion about the structure of the personality, means focusing on the individual as a goal, subject, result and the main criterion for its effectiveness in the design and implementation of the pedagogical process. It strongly demands recognition of the uniqueness of the individual, his intellectual and moral freedom, and the right to respect. It assumes a reliance in education on the natural process of self-development of the individual's inclinations and creative potential, making appropriate conditions for this.

The *activity approach* acts as a theoretical and methodological strategy of research and facilitates to study the content of the future teacher's readiness to professional adaptation in inclusive education, optimize the ways of its formation and development, and determine ways of practical improvement. The main "prism" for pedagogy is the idea of activity. In the field of view of pedagogical science, what is included in pedagogical activity becomes a special object of analysis. Therefore, pedagogical reality can be defined as reality taken for scientific consideration in the aspect of pedagogical activity. We can say otherwise: this is the part of reality that is included in pedagogical activity.

The *differentiated approach* to teaching and upbringing is one of the ways to solve pedagogical problems, taking into account the socio-psychological characteristics of groups of education that exist in the community of students as its structural or informal associations or are distinguished by the teacher for similar individual, personal qualities of students (Mynbayeva et al., 2017). The differentiated approach facilitates the educational activity of the teacher, because it allows to determine the content and forms of education not for each student (which is difficult in conditions of high-class occupancy), but for a certain "category" of students. The implementation of a differentiated approach is facilitated by the creation of special pedagogical situations that help to reveal the merits of students. A necessary condition for a differentiated approach is the study of interpersonal relationships. A differentiated approach makes it possible to influence the relationship between an individual and a group, a group and a team, students and adults, etc. The effectiveness of the differentiated approach depends directly on the creative atmosphere of cooperation in the educational organization and its democratic management.

The differentiated approach includes a very wide range of pedagogical actions. The review of psychological and pedagogical literature allowed us to adopt a definition that considers a differentiated approach as a system of measures (a set of techniques and forms of pedagogical influence) for the study, take into account and develop the typological individual characteristics of various groups of students working on a single curriculum.

The effectiveness of the process of preparing future teachers to professional adaptation in inclusive education is achieved through the use of basic *pedagogical principles*, as well as a *special teaching principles*. The pedagogical principles include:

- *Principle of humanization* - recognition of the child's personality as the highest value of education.
- *System-based principle*, where the educational institution is an independent system, all elements are interconnected.
- *Event-based principle*: the presence of bright memorable events, the creators and participants of which are members of the commonwealth.
- *The principle of success*, in which the positive tone of a child's life is based on the general psychological school climate and on his own success in activities.
- *The principle of cultural conformity*, where education is based on universal values, is built in accordance with the values and norms of national culture and regional traditions that do not contradict universal values.

In addition, the special principles include:

- *The principle of corrective and compensatory orientation* of education, assuming reliance on the healthy forces of the student, the student with disabilities, the construction of the educational process using preserved analyzers, and on functions and systems of the body in accordance with the specifics of the nature of the lack of development.
- *The principle of the activity* in teaching and upbringing, which suggests that, based on a child's healthy strengths and safe abilities, a substantive and practical activity develops the sensorimotor basis of higher mental functions. These functions include language and thinking, compensation for the insufficiency of life and practical experience, creating conditions for developing the skills of situational-activity and other types of communication, providing sustainable motivation for communication and activity in the teaching process, and mastering the skills of social interaction.
- *The principle of creative activity*, which gives everyone the right to creative activity, the opportunity to develop their creative potential and realizes it in the process of study and work, regardless of physical abnormalities.

The model developed for this study has the following components: *target, content, procedural, and evaluative-effective* (Table 1). This is a structural and content model of preparing future teacher-psychologist showing how to professionally adapt in an inclusive educational environment.

Table-1. Structural and content model of preparing future teacher-psychologist for professional adaptation in an inclusive educational environment.

Social order			
State educational curriculum			
Theoretical and methodological foundations			
Holistic approach	Personal-oriented approach	Activity approach	Differentiated approach
Special principles		General principles	
Components			
Target Component	Content Component	Procedural Component	Evaluative-Effective Component
Purpose: the readiness of future teachers to professionally adapt in an inclusive education environment.	Develop state educational curriculum, academic curricular of disciplines, subject training disciplines, educational and methodological support.	Means of teaching: textbooks and reference literature, guidelines and instructions, E-textbooks, Internet resources. Methods of teaching: communicative methods, demonstration, project method (PBL), brainstorming method, game-based learning, educational experiment, etc. Forms of teaching: Special course "Preparing future teachers to professional adaptation in inclusive education".	Levels of future teacher readiness (low, medium, above average, high). Development of components of the future teacher's readiness to professional adaptation in inclusive education (motivational, cognitive, creative, activity-based).
The learning outcome: Teacher-psychologist who will be ready to professionally adapt in an inclusive education environment.			

The target component involves the formulation of purpose and objectives for preparing future teachers to professional adaptation with students in an inclusive education environment. It acts as a central system-forming component of the pedagogical system. The purpose of the model is to prepare a modern competent teacher to

professional adaptation in an inclusive education environment, who is able to adapt his subject according to each student's abilities, use modern developments in science and technology, and effectively create the teaching process. Targeted training of future teachers to work with students in inclusive education is carried out through the development and implementation of a special course "Preparing future teachers to professional adaptation with students in inclusive education", the use of various forms and methods of teaching, both traditional and innovative, including: research methods, methods for implementing creative tasks, case studies, creative teaching methods (brainstorming, heuristics, synectics), project methods, business, role-playing, interactive games, essays on inclusive education, etc.; selection of practical tasks: graphic dictation, clusters, "cinquaines", the use of information technologies in the educational process, a block of individual tasks, creative works, etc.

The content component includes theoretical foundations of disciplines and general professional sciences. The content component of the system is determined by the curriculum and textbooks for the disciplines. The content of teaching is a sum of knowledge, skills and abilities, mainly corresponding to the current state of scientific knowledge, pedagogically processed into the general foundations of science, social relations, and production. This component includes state educational curriculum, academic curricular of disciplines, subject training disciplines, educational and methodological support.

The procedural component requires the use of methods, tools and forms of teaching and regulation of the process, focused on the quality training of future specialists. The function of this component is to build the educational process in accordance with the logic of the content and the purpose. The process of preparing a future teacher to professionally adapt in an inclusive education environment and involves the formation of a special culture of the teacher in relation to the individual characteristics of students, and the ability to adapt the material to their abilities. Creative methods of teaching are used by us in the process of conducting practical classes with students, they allow us to generalize theoretical knowledge and find ways to implement them in the practical activities of the teacher. The use of the "clusters" method contributes to reflection in teaching and the formation of skills for graphical representation of information. The project method is used in classes of various subjects, which makes the educational process more holistic and systematic. The introduction of the project method into the educational process opens up significant opportunities for improving the quality of education, and a set of tasks is being solved, including the formation of all components of research activities for students. We pay special attention to planning of classes, independent work of students, its organization, strengthening of feedback in the teaching process.

The evaluative-effective component is characterized by indicators and levels of readiness of the future teacher for the upcoming work, taking into account the peculiarities of building the educational process and the students population. This component is associated with the creation of a diagnostic device that allows to determine the level of readiness of the future teacher to professional adaptation in an inclusive education. A developed structural and content model is the basis for organizing the process of preparing future teachers to professional adaptation in inclusive education.

The main purpose of the research analyzed in this study was to test the effectiveness of the developed model of training future teacher-psychologist to professionally adapt in an inclusive educational environment, which is an integral system of continuous pedagogical education. The experiment involved students - future teachers-psychologists of control and experimental groups. The experiment included three stages: ascertaining, forming, and control. At the *ascertaining stage of experiment*, the levels of readiness of the future teacher to professional adaptation in inclusive education were revealed as below:

- *level 1* - the *low* was characterized by the fact that the formation of components that determined the readiness of future teachers to professional adaptation in an inclusive education could be called theoretical awareness at the minimum necessary level.
- *level 2* - the *average*, was characterized by a significant amount and breadth of knowledge, skills necessary for a future teacher to professional adaptation in an inclusive education.

- *level 3* – the *above average*, was characterized by the ability to apply the acquired knowledge, skills to professional adaptation with students in an inclusive educational environment.
- *level 4* – the *highest level* of readiness of the future teacher to professional adaptation with students in an inclusive education, characterized by creative self-realization of students.

At the *formative stage of the experiment*, the objective was to implement a model for preparing future teachers to professional adaptation with students in an inclusive education. For this purpose, 1) the forms, methods and means of teaching that most contribute to the formation of the future teacher's readiness to professional adaptation in an inclusive education were established; and 2) scientific and methodical support system was developed and implemented.

At the *control stage of the experiment*, the model of the study was tested. The effectiveness of the model was tested for preparing future teachers to professional adaptation in inclusive education. Students measured the formation of the components of the readiness of future teachers-psychologists to professionally adapt in an inclusive education.

To assess the motivational component, the method of K. Zamfir (modified by of A. A. Rean was carried out. Based on the results obtained, the motivational complex of the individual was determined - the ratio between three types of motivation: internal motivation (IM), external positive motivation (EPM) and external negative motivation (ENM). High motivational complex (IM > EPM > ENM) - characterized by a clear understanding of the meaning and role of future teaching activities, the desire to achieve certain positive results in it. The optimal (average) motivational complex (IM = EPM > ENM) was characterized by the teacher's satisfaction with the future profession. A low motivational complex is the type of ENM > EPM > IM, characterized by the predominance of the desire to blame, intolerance, and internal instability. These results were not recorded among the participants in the experimental group. In the control group, mainly the average motivational complex was recorded, as well as the low and high motivational complex were marked to a much lesser extent.

To determine the level of *the cognitive component*, the following test was conducted during the training of future teachers. The methodology used for diagnosing the cognitive component included the following:

- *Defining features of Persons with Disabilities*: This included facilitating the understanding of the following:
 1. The term “disability”;
 2. Disability statistics in Kazakhstan and abroad.
 3. The problem of child disability.
 4. The reasons for the growth of the child's disability.
 5. Structure of child disability.
 6. Difficulties in recognizing a child as disabled.
 7. Risk factors that affect children's disabilities.
 8. Classifications used in the implementation of medical and social expertise of citizens by state institutions of medical and social expertise.
 9. The main types of violations of human body functions.
 10. Indicators that characterize persistent violations of human body functions.
 11. Main categories of human activity.
 12. The degree of severity of restrictions on the main categories of life activity.
 13. Criteria for determining the first disability group.
 14. Criteria for determining the second disability group.
 15. Criteria for determining the third disability group.
- *Determining. Mental Characteristics of People with Disabilities* This included understanding the following:
 1. Historical aspect of research on the mental characteristics of people with disabilities.
 2. Features of children with cerebral palsy.
 3. Experimental psychological research of motivational sphere of children with cerebral palsy.

4. Social factors that affect features.
5. Typology of K. Jung's personality.
6. Planning rehabilitation programs for children with cerebral palsy.

The level of the cognitive component was determined by the following formula:

$$N=K_1/K,$$

where **N** is the coefficient of the level of formation of the cognitive component,

K - total number of tasks, **K₁** - the number of tasks completed correctly.

The findings are summarized as below:

1. A *low level* of the cognitive component was characterized by the ability to reproduce knowledge at the reproductive level.
2. An *average level* of cognitive component was characterized by the ability to broadcast a situation from one area of knowledge to another.
3. A *high level* of cognitive component was characterized by a meaningful knowledge of terminology, large-scale, deep, meaningful, ordered, structured knowledge in the field of professional activity.

According to the experiment, the result of training in the experimental group showed that the coefficient of the cognitive component increased, as compared to the control group (see [Table 2](#)).

Besides, to quantify the creative component, the "Creativity" test was conducted (adapted from N. F. Vishnyakova), which allowed to identify the level of creative tendencies of the individual and build a psychological creative profile, reflecting the creative component of the image "I am real" and the idea of the image "I am ideal" (Vishnyakova, 1998). Comparing the two images of creativity "I am real" and "I am ideal" allowed to determine the creative reserve and creative potential of the individual. This "Creativity" test included the following characteristics: creative thinking (CT), curiosity (C), originality (O), imagination (I), intuition (In), emotionality (E), sense of humor (SH), creative attitude to the profession (CA) (see [Table 2](#)).

Based on the results of the research and processing of the control stage results, it can be concluded that the creative component of the experimental group had positive dynamics. To assess *the activity component* of the readiness of future teachers-psychologists to professional adaptation in inclusive education, studies were conducted using scales modified by K. E. Romanova (Romanova, 2010). As a result of monitoring the level of formation of the activity component, a higher dynamics was revealed in the experimental group than in the control group. [Table 2](#) shows the final indicators of the components that determined the readiness of future teachers-psychologists to professional adaptation in inclusive education in the control (CG) and experimental group (EG), expressed as a percentage.

Table-2. Levels of readiness of future teachers-psychologists to professional adaptation in an inclusive educational environment.

Component diagnostics of the future teacher's readiness to professional adaptation in an inclusive environment	Level 1, low, %		Level 2, average, %		Level 3, above average, %		Level 4 – highest level, %	
	CG	EG	CG	EG	CG	EG	CG	EG
Motivational component	30	-	40	10	20	20	10	70
Cognitive component	25	-	65	20	5	30	5	50
Creative component	30	-	30	20	30	40	10	40
Activity component	50	-	25	-	25	35	-	65

The results of the pedagogical experiment show that by the end of training for the majority of students in the experimental group, the components of the future teacher's readiness to pedagogical adaptation in inclusive education were formed at the third and fourth levels with 75% and 20%, respectively, while in the control group, the majority remained at the second and third levels – with 20% and 65% of students, respectively.

Thus, the results of the pedagogical experiment indicated the feasibility of introducing the proposed model of preparing a future teacher to professional adaptation in an inclusive education.

4. CONCLUSION

The essence of the concept of inclusive education is defined as a part of general education, which implies accessibility of education for all, in terms of adaptation to the various needs of all children, which provides access to education for children with disabilities. This study utilized the exploration of scientific, scientific-methodical, psychological-pedagogical literature, which facilitated the clarification of the definitions of future teacher's readiness to professional adaptation in an inclusive education, which we defined as a set of knowledge and ideas about the characteristics of students with disabilities, the possession of methods and techniques of working with these students in an inclusive education, as well as the formation of certain personal qualities that provide a stable motivation for this activity.

The components of the future teacher's readiness to professional adaptation in inclusive education were identified as thus:

1. *Motivational*, which was a set of persistent motives to work in an inclusive education, focus on the implementation of an effective teaching process, recognition of each student as a subject of educational activity, and the formation of internal readiness for a positive perception of students with disabilities;
2. *Cognitive*, which was a system of knowledge and ideas about the problem of disability, the features of mental and physical development of people with disabilities and the features of creating a pedagogical process with such students;
3. *creative* – which reflected the creative activity and personal characteristics of the teacher, allowing to create new material and spiritual values, as well as to develop the creative potential of students with disabilities, guided by their abilities;
4. *activity* – which consisted of methods and techniques for implementing professional and pedagogical knowledge in working with students with disabilities and involves the formation of future teachers of appropriate professional competencies.

A Structural content model of preparing future teacher-psychologist for professional adaptation in an inclusive educational environment was developed and tested. It included the purpose, approaches, principles, and components: target, content, procedural, and evaluative-effective. In the course of experimental work, the effectiveness of the model of preparing future teachers to professional adaptation in inclusive education was proved. The study suggests to implement the structural content model in real-life educational setting, to train the teachers preparing for inclusive education. Its implications are for educationists, administrators and teachers who are directly connected with inclusive education.

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