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ПЕТР Хайек, PhD, Юникорн университеті, Қаржы департаментінің қауымдастырылған профессоры (Чех Республикасы), <https://www.scopus.com/authid/detail.uri?authorId=35726855800>, <https://www.webofscience.com/wos/author/record/672404>.

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ЛУКЬЯНЕНКО Ирина Григорьевна, экономика ғылымдарының докторы, профессор, «Киево-Могилянская академия» ұлттық университеті кафедрасының меңгерушісі (Киев, Украина), <https://www.scopus.com/authid/detail.uri?authorId=57189348551>, <https://www.webofscience.com/wos/author/record/939510>.

ЕСІМЖАНОВА Сайра Рафихқызы, экономика ғылымдарының докторы, Халықаралық бизнес университетінің профессоры (Алматы, Қазақстан), <https://www.scopus.com/authid/detail.uri?authorId=56499485500>, <https://www.webofscience.com/wos/author/record/45951098>.

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РИШЕЛЬ Мариновски, PhD в области образования, профессор факультета педагогики Летбриджского университета, (Альберта, Канада), <https://www.scopus.com/authid/detail.uri?authorId=57070452800>, <https://www.webofscience.com/wos/author/record/16130920>.

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M. Auezov South Kazakhstan University, Shymkent, Kazakhstan.

E-mail: perizatpa11@mail.ru

STRUCTURAL MODEL OF TRAINING OF FUTURE TEACHERS FOR INCLUSIVE LEARNING

Parmankulova P.Zh. – PhD, senior lecturer, M. Auezov South Kazakhstan University, Shymkent, Kazakhstan, E-mail: perizatpa11@mail.ru, <https://orcid.org/0000-0001-5793-4566>;

Syzdyk M.N. – postdoctoral, senior lecturer, M. Auezov South Kazakhstan University, Shymkent, Kazakhstan. E-mail: makpal_s@list.ru, <https://orcid.org/0000-0002-0573-4594>;

Dzhanzakova M.A. – postdoctoral, M. Auezov South Kazakhstan University, Shymkent, Kazakhstan, E-mail: monamie87@mail.ru, <https://orcid.org/0000-0001-9597-9984>.

Abstract. In creating special educational conditions for disable people, inclusive education plays a major role, where the teacher is the main character. Disable students have right to education in any institution, educators must teach them under the inclusive education conditions. Actuality of the research due to society's order to train teachers for inclusive education with vocational education. In this research used methods of analysis scientific literature and regulatory documents; survey, modeling; synthesis, generalization. The survey was online using Google form service, WhatsApp messenger. The hypothesis of the research is the model of training teachers for inclusive education, developed taking into account modern trends in the development of inclusive education, forms and ensures its organization, based on the requirements for the professional competence of future specialists, will ensure the provision of high-quality teaching staff. The developed model consists of 5 blocks: target, methodological, content, process, reflective. All components are interconnected and developed on the basis of methodological approaches and conceptual ideas. This model tested according to motivational-value, cognitive, activity and evaluative criteria by 146 students of universities like M. Auezov South Kazakhstan, Khoja Ahmed Yassawi International Kazakh-Turkish and Kazakh National Women's Pedagogical. The created model is a holistic, dynamic system and makes the future teachers training for inclusive education targeted. The target consumers of the model can be organizations of higher and secondary education, teachers of schools and universities, undergraduates, doctoral students.

Key words: inclusive education, person with disabilities, future pedagogue, training for inclusive education, model, structural model

П.Ж. Парманкулова, М.Н. Сыздық, М.А. Джанзакова, 2025.

М. Әуезов атындағы Оңтүстік Қазақстан университеті, Шымкент, Қазақстан.

E-mail: perizatpa11@mail.ru

БОЛАШАҚ ПЕДАГОГТАРДЫ ИНКЛЮЗИВТІ ОҚЫТУҒА ДАЯРЛАУДЫҢ ҚҰРЫЛЫМДЫҚ МОДЕЛІ

Парманкулова П.Ж. – PhD, аға оқытушы, М. Әуезов атындағы Оңтүстік Қазақстан университеті, Шымкент, Қазақстан, E-mail: perizatpa11@mail.ru, <https://orcid.org/0000-0001-5793-4566>;

Сыздық М.Н. – постдокторант, аға оқытушы, М. Әуезов атындағы Оңтүстік Қазақстан университеті, Шымкент, Қазақстан, E-mail: makpal_s@list.ru, <https://orcid.org/0000-0002-0573-4594>;

Джанзакова М.А. – постдокторант, М. Әуезов атындағы Оңтүстік Қазақстан университеті, Шымкент, Қазақстан, E-mail: monamie87@mail.ru, <https://orcid.org/0000-0001-9597-9984>.

Аннотация. Денсаулығына байланысты мүмкіндігі шектеулі жандардың білім алуы үшін ерекше білім беру жағдайларын жасауда инклюзивті білім беру негізгі рөл атқарады, мұнда педагог басты кейіпкер болып есептеледі. Денсаулығына байланысты мүмкіндігі шектеулі тұлға кез келген білім беру ұйымында білім алуға құқылы болғандықтан, әрбір педагог инклюзивті білім беру жағдайында өзінің педагогикалық қызметін орындай алуы тиіс. Бұл мәселенің өзектілігі кәсіптік білім беру үдерісінде инклюзивті білім беру жағдайында жұмыс жасайтын педагогтарды даярлауға қоғамның әлеуметтік тапсырысымен анықталып отыр. Зерттеу жұмыстарын жүргізу үшін ғылыми әдебиеттер мен нормативтік-құқықтық құжаттарды талдау, сауалнама жүргізу, модельдеу, синтездеу және жалпылау әдістері қолданылды. Сауалнама онлайн режимде Google форма қызметін, сонымен қатар WhatsApp мессенджерін қолдана отырып жүргізілді. Зерттеудің гипотезасы инклюзияның даму тенденциялары, инклюзивті білім беруді ұйымдастыру формалары мен тәсілдері және болашақ педагог мамандардың кәсіби құзыреттіліктері негізінде жасалған педагогтарды инклюзивті оқытуға даярлау моделі сапалы мамандар дайындауға негіз болады деген қағидаға сүйенеді. Біз ұсынған модель 5 блоктан тұрады: мақсатты, әдіснамалық, мазмұндық, үдерістік, рефлексивтік. Модельдің барлық компоненттері өзара байланысты және әдістемелік тәсілдер мен тұжырымдамалық идеялар негізінде әзірленіп отыр. Бұл модель мотивациялық-құндылықтық, танымдық, іс-әрекеттік және өлшемдік критерийлер бойынша М. Әуезов атындағы Оңтүстік Қазақстан университеті, Қожа Ахмет Яссауи атындағы халықаралық қазақ-түрік университеті, Қазақ Ұлттық қыздар педагогикалық университеттерінің 146 білімгерлерінің қатысуымен апробациядан өткізілді. Біз жасаған модель біртұтас, динамикалық жүйе болып табылады және болашақ педагогтарды инклюзивті оқытуға даярлау

үдерісін мақсатты етуге мүмкіндік береді. Модельдің мақсатты тұтынушылары жоғары және орта білім беру ұйымдары, мектеп пен жоғары оқу орындарының оқытушылары, магистранттар мен докторанттар болып табылады.

Түйін сөздер: инклюзивті оқыту, мүмкіндігі шектеулі тұлға, болашақ педагог, инклюзивті оқытуға даярлау, модель, құрылымдық модель.

П.Ж. Парманкулова, М.Н. Сыздық, М.А. Джанзакова, 2025.

Южно-Казахстанский университет им. М. Ауэзова, Шымкент, Казахстан.

E-mail: perizatpa11@mail.ru

СТРУКТУРНАЯ МОДЕЛЬ ПОДГОТОВКИ БУДУЩИХ ПЕДАГОГОВ К ИНКЛЮЗИВНОМУ ОБУЧЕНИЮ

П.Ж. Парманкулова – PhD, старший преподаватель, Южно-Казахстанский университет им. М. Ауэзова, Шымкент, Казахстан, E-mail: perizatpa11@mail.ru, <https://orcid.org/0000-0001-5793-4566>;

М.Н. Сыздық – постдокторант, старший преподаватель, Южно-Казахстанский университет им. М. Ауэзова, Шымкент, Казахстан, E-mail: makpal_s@list.ru, <https://orcid.org/0000-0002-0573-4594>;

М.А. Джанзакова – постдокторант, Южно-Казахстанский университет им. М. Ауэзова, Шымкент, Казахстан, E-mail: monamie87@mail.ru, <https://orcid.org/0000-0001-9597-9984>.

Аннотация. В создании особых образовательных условий для лиц с ограниченными возможностями здоровья основную роль играет инклюзивное образование, где педагог является главным действующим лицом. Обучающийся с ОВЗ имеет право получить образование в любом учебном заведении, где каждый педагог должен уметь выполнять свою педагогическую деятельность в условиях инклюзивного образования. Актуальность данной проблемы определяется социальным заказом общества на подготовку педагогов к работе в условиях инклюзивного образования в процессе профессионального образования. **Для проведения исследования были использованы** методы анализа научной литературы и нормативно-правовых документов; анкетирования; моделирования; синтеза и обобщения. Анкетирование было проведено в режиме online с использованием сервиса Google формы, а также мессенджера WhatsApp. Гипотеза исследования заключается в том, что модель подготовки педагогов к инклюзивному обучению, разработанная с учётом современных тенденций развития инклюзивного образования, форм и способов его организации, а также на основе требований к профессиональным компетенциям будущих специалистов, будет способствовать обеспечению качественной подготовки педагогических кадров. Разработанная нами модель состоит из 5 основных блоков: целевой, методологический, содержательный, процессный, рефлексивный. Все компоненты модели взаимосвязаны и разработаны на основе методологических подходов и концептуальных идей. Данная модель апробирована по мотивационно-ценностным,

познавательным, деятельностным и оценочным критериям 146 обучающимися Южно-Казахстанского университета имени М. Ауэзова, Международного казахско-турецкого университета имени Ходжи Ахмеда Яссауи, Казахского Национального женского педагогического университета. Созданная модель является целостной, динамичной системой и дает возможность сделать целенаправленным процесс подготовки будущих педагогов к инклюзивному обучению. Целевыми потребителями модели могут выступить организации высшего и среднего образования, педагоги школ и вузов, магистранты и докторанты.

Ключевые слова: инклюзивное обучение, лицо с ограниченными возможностями, будущий педагог, подготовка к инклюзивному обучению, модель, структурная модель.

Introduction

In modern conditions of globalization, the main competitive advantage, driving force and strategic resource of the country is human capital. In society, special attention is paid to persons with disabilities in physical and mental health, most of whom need special educational conditions. The main role is played by inclusive education, in which every person is important, and the teacher is the main actor in the implementation of educational practices that can support the development of each person with disabilities.

Inclusive education is a priority in educating children with disabilities, implying access to education for everyone. The education of children with disabilities (Makoelle, et al., 2021) occupies a special place in the modern education system. According to Moriña, Perera, & Carballo (2020), effective inclusive education benefits not only children with special needs, but all children. Here the question arises about the readiness of the education system to provide quality education to children with disabilities, to provide an accessible environment, since the main task of inclusive education is to create a barrier-free environment for education and professional training of people with disabilities in physical and mental health (Staroverova, et al., 2019).

Based on the legislation of the Republic of Kazakhstan, a student with disabilities due to health has the right to study at any educational institution, so every teacher should be able to perform his/her pedagogical activities in the context of inclusive education.

The relevance of this issue is determined by the social order of society to prepare teachers to work with students in the conditions of inclusive education who have certain professional and personal qualities. Higher education is faced with the question of high-quality preparation of future teachers to work in an inclusive school. Universities cannot provide a future teacher with all the professional knowledge he needs, but at the same time they can provide generalized productive knowledge that will help develop professional thinking (Yashchuk, et al., 2020). The education system is required to prepare a highly qualified, competitive, tolerant teacher who is

able to think and analyze independently. Professional training of future teachers to work with children with special needs at the present stage is mainly carried out in the process of vocational education (Martynchuk, 2019).

The teacher must be aware of the social component of his profession, know the individual psychological characteristics of students, take into account the age levels and educational needs of students with disabilities, as well as acquire specific knowledge in the field of various physiological, psychological pathologies and characteristic difficulties in the development of the child, which can be, as congenital and as well acquired character. E. Walton, L. Rusznyak (2019) believe that this foundation must be strong enough so that over time, future teachers can develop the competencies necessary for inclusive teaching. The development of inclusive processes in education at the present stage is largely due to the professional preparedness of teachers (Alyokhina, 2016).

Materials and methods

In this work, to solve the problems and test the initial assumptions, we used a set of complementary methods adequate to the subject of the study: study of scientific and scientific-methodological literature on the problem under study, analysis and synthesis of material, analysis of concepts, theories, approaches, analysis of regulatory documents, modeling method, synthesis, generalization. To collect materials, a search was conducted using the keywords “inclusion”, “inclusive education”, “training of teachers”, “training of teachers of inclusive education”, “model”, “model of teacher training” in electronic scientific databases Scopus, Web of Science, Google Scholar. An analysis of published articles in journals recommended by the Committee for Quality Assurance in the Field of Science and Higher Education of the Ministry of Science and Higher Education of the Republic of Kazakhstan was also carried out.

The methodological basis of the study were the works of such scientists as I.V. Blauberg, V.N. Sadovsky, V.V. Kraevsky, Ye.V. Berezhnova, E.G. Yudin, Sh.T. Taubayeva, Zh.I. Namazbayeva, Z.A. Movkebayeva and others. The main methods were the questionnaires of N.P. Fetiskin’s survey “Methodology of self-assessment of professional pedagogical motivation”, L.N. Berezhnova’s survey “Methodology for diagnosing the level of self-development and professional pedagogical activities”, V. Sinyavskiy and B.A. Fedorishin’s survey “Methodology for assessing the communicative and organizational abilities of a person” and O.S. Kuzmina’s methods of “Assessment of the ability to solve professional tasks” and “Assessment of the results of student activities”, as well as the survey “Readiness for inclusive education”. The survey was conducted online using the Google form service and the WhatsApp messenger. 146 students of M. Auezov South Kazakhstan University, Khoja Ahmet Yassauy International Kazakh-Turkish University, Kazakh National Girls’ Pedagogical University participated in the testing of the developed model.

Results and discussion

In this study, we tried to define the essence of the concept of “readiness of a future teacher to work in conditions of inclusive education” and develop a model of a future teacher of inclusive education. The issues of the future teacher’s readiness

to work in the structure of inclusive education were developed by scientists A.V. Khutorskoy, V.Ts. Tsyrenkov, T.Yu. Chetverikova, L.M.Shipitsina, I.N. Simaeva, E.I. Ponomareva and others.

V.V. Khitryuk (2015) for the first time introduces the concept of “inclusive readiness” and defines it as a complex integral subjective quality of a teacher’s personality, based on academic, professional and social-personal competencies. According to O.A. Kozyreva (2017) inclusive readiness of a teacher is the level of his knowledge and professionalism, which allows us to make optimal decisions in a specific pedagogical situation. The scientist identifies the following levels of formation of inclusive readiness: high (or optimal); advanced (or functional); acceptable (or reproductive); critical (or low).

Readiness of the future teacher to work with students in the conditions of inclusive education Yu.V. Shumilovskaya (2011) defines it as a body of knowledge and ideas about the characteristics of students with disabilities, knowledge of ways and techniques of working with these students in an inclusive education setting. S.V. Alyokhina and et al. (2011) believe that a teacher’s readiness for the conditions of inclusion is determined by two indicators: professional readiness and psychological readiness. In the works of Ye.G. Samartseva (2011) “a teacher’s professional readiness for inclusive education is a dynamic, integrative professional and personal education, characterized by the presence of an attitude that presupposes the teacher’s need to implement inclusive education. Holistic readiness according to S.Skočić Mihić, D.Lončarić & N.Bažon (2019) is interpreted as the ability of teachers to evaluate their effectiveness in motivating students, encouraging and persuading them to succeed in their studies. Lani Florian & Donatella Camedda (2020) note that high-quality teacher preparation is critical to inclusive learning.

As shown above, each scientist gives different definitions to the concept of “teacher’s readiness for inclusive education”. Therefore, we decided to summarize the given definitions and show them in the form of a diagram (Table 1).

Table 1 - Description of the definitions given to the concept of “Teacher’s preparation for inclusive education”

The readiness of the teacher for inclusive education is ...	Authors	Components
... the teacher's ability to solve professional tasks in the field of inclusive education	O.S. Kuzmina	motivational value, operational action, reflexive assessment
... the need to perform professional activities of the teacher in the context of inclusive education	Ye.G. Samartseva	personal-meaningful, cognitive-technological
... the teacher's methods and methods of inclusive education, as well as certain personal qualities that provide motivation for this activity	Yu.V. Shumilovskaya	motivational, cognitive, creative, active
... the intention and ability of the teacher to perform effective professional-pedagogical activities in an inclusive educational space	V.V. Khitryuk	cognitive, emotional, motivational, reflexive communicative

Thus, we identified *six areas* of teacher training in order to reveal the content and meaning of the formation of professional readiness of teachers for inclusive education and to compile a model of training future teachers for inclusive education (P.Zh. Parmankulova, 2022).

The first direction includes *cognitive, content and technological components* of professional teacher training. The cognitive component considers inclusive education as a special methodological, theoretical and practical system of learning theories and methods. The content component shows the qualities of tolerance, non-prejudice, establishing the right relationship and self-improvement, the motivational-content orientation of the will and feelings of the teacher's mind, enthusiasm, ability to work and a set of personal orientations. The technological component consists of practical skills of using methods, approaches, technologies, and tools to achieve optimal results of inclusive education.

The second direction considers *orientation, constructive and practical skills* of the professional training module for inclusive education of the teacher. Orientation module provides an opportunity to learn the conceptual foundations of inclusive education while learning the basic subjects of the curriculum. Constructive module learns the basic concepts and methods of inclusive education in the course of mastering elective subjects. And the practical module opens the way to learn practical experiences of inclusive education and gain experience.

The third direction consists of *informational, functional and motivational requirements* of professional teacher training. Information requirements are knowledge of the history, concepts, theories, principles, normative legislation of inclusive education. Functional requirements are organization of pedagogical work in the context of inclusive education, ways of developing professional knowledge, improvement of professional abilities and activities, knowledge of ways of mutual communication, having communication skills. Motivational requirements are business, enthusiasm, conscious orientation in the organization of inclusive education, change of the teacher's experience, improvement of professional activity, desire for self-development, tolerance, responsibility qualities.

The fourth direction considers the *pedagogical conditions* of professional teacher training. It includes monitoring, evaluation i.e. analysis of difficulties of professional activity, causes of difficulties, evaluation of results of professional and personal achievements of the teacher, and methodological conditions.

The fifth direction describes *problem-based, interactive and innovative methods* of teaching in professional teacher training. Problem-based learning is based on a specific problem type of stimulus, and therefore requires that the material be presented as a sequence of problem situations. Interactive methods of teaching provide emotional connections, development of creativity, self-development and active lifestyle, creative potential. Innovative methods open the way to new knowledge and combine learning with life experience.

The sixth direction considers *advantageous* (individualism, understanding and acceptance of the ideology of inclusive education, personal orientation and being

oriented), *flexible* (supporting inclusive education, acquiring knowledge and skills) and *effective* (organization of inclusive education, professional tasks in the process of inclusive education) professional training of the teacher. knowledge of solution methods) levels are considered.

From a general theoretical point of view, the teacher's readiness for inclusive education has a complex dynamic structure, which includes a number of components: *motivational* (responsibility for performing tasks); *orientation* (knowledge and ideas about features, conditions and requirements of the activity); *action* (mastering the methods and methodologies of the activity, the necessary knowledge and skills); *voluntary* (self-control, the ability to manage actions that form the performance of tasks); *assessment* (assessing one's readiness and compliance of the process of solving professional problems with optimal models).

In a *narrow sense*, the teacher's readiness to inclusive education is considered as the mobilization of all his psychophysiological systems in order to effectively perform any activity, and in a *broader sense*, it is considered as a set of professionally defined requirements. The main feature of a teacher's readiness for professional activity is its integrative nature, harmony, stability and continuity of the main components of a professional person, that is, psychological unity. Training future teachers for inclusive education is based on inclusive ethics, inclusive theory, and inclusive practice.

One of the tasks of this study is the development of a model of a teacher of inclusive education, for the solution of which a model of the process of preparing future teachers for pedagogical activities in an inclusive environment is designed and developed, and the level of readiness of a future teacher to work in the conditions of inclusive education is determined.

According to V.A. Stoffa (1966), a model is a mentally represented or materialized system that allows obtaining new information about this object. V.G. Afanasyev (2018) defines a model as a simplified, schematized reflection of an object or phenomenon in a certain way, which is created in the process of modeling, when one system is reproduced in another.

Modeled by N.N. Moiseev (1995) understands "simplified, packaged knowledge, carrying well-defined, limited information about the subject (phenomenon), reflecting one or another of its individual properties, a special form of encoding information".

V.G. Pishchulin (2002) shows the composition of professional knowledge and personal qualities in creating a model of a future specialist, and the following requirements are set for future teachers: to love his/her profession and accept it responsibly; to improve constantly knowledge and pedagogical skills; to have deep knowledge of the psychology of his/her students; to perform duties honestly and sincerely; to know the requirements and interests of students; to use own experience for the benefit of others; to be a role model at all times.

Of course, our scientists presented their models regarding the issue of training future teachers for inclusive education. The didactic model of the future teacher's readiness for inclusive education proposed by V.V. Hitryuk (2015) consists of

motivational, content, procedural-technological and control-resultative blocks. Yu.V. Shumilovskaya (2011) created a model for training future teachers to work in the context of inclusive education, which includes goal, content, procedural and evaluation-performance blocks. A model for the formation of inclusive competence of future teachers in the process of professional training, developed by I.N. Khafizullina (2005), includes a sequence of information-oriented, quasi-professional and activity stages. In the work of E.V. Ketrish (2018) model of developing the readiness of future teachers to work in conditions of inclusive education is considered through the implementation of systemic, competency-based, activity-based and axiological approaches.

We relied on development trends of inclusion, forms and methods of organizing inclusive education, and professional competencies in training future specialists in creating a model for training future teachers for inclusive education. In general, the presented methodological approaches determine the author's methodological position on the solution of the identified problem. Based on the results of the analysis of the researched problem, a structural model of training future teachers for inclusive education is developed.

Our proposed model consists of 5 blocks: *target*; *methodological*; *content*; *process*; *reflexive*. The created model is a whole, continuous dynamic system. In the design of the model, we were guided by the fact that all components are scientifically interconnected and developed on the basis of methodological approaches and conceptual ideas.

In the target part, the purpose of the structural model of training future teachers for inclusive education is determined. The target block includes the goal of preparing future teachers for inclusive education. The goal is to train teachers who are familiar with the national and international normative legal acts and legislation of inclusive education, which will teach future specialists inclusively.

In the methodological block, we were guided by the following methodological pillars that make up the methodological foundations: consistency, activity, axiological, person-oriented, synergetic, competence and social environment. Organizational, theoretical, technological, monitoring pedagogical conditions include the content of training future teachers for inclusive education.

The process block includes educational forms, educational methods and educational tools used in the training of future teachers for inclusive education. A future specialist must have professional knowledge, business and skills, professional ability to perform his/her duties, professional competence and professional business qualities. The educational process at a higher educational institution should ensure the development and formation of a future specialist as an individual with high professional competence.

The dimension block includes the assessment of the professional training of a teacher who teaches future specialists inclusively. As a result, a competent teacher ready for inclusive training of future specialists is formed.

Following the modeling method allowed us to create a structural model for

preparing future teachers to work in conditions of inclusive education. A schematic model of developing the readiness of future teachers for inclusive teaching is presented in Figure 1.

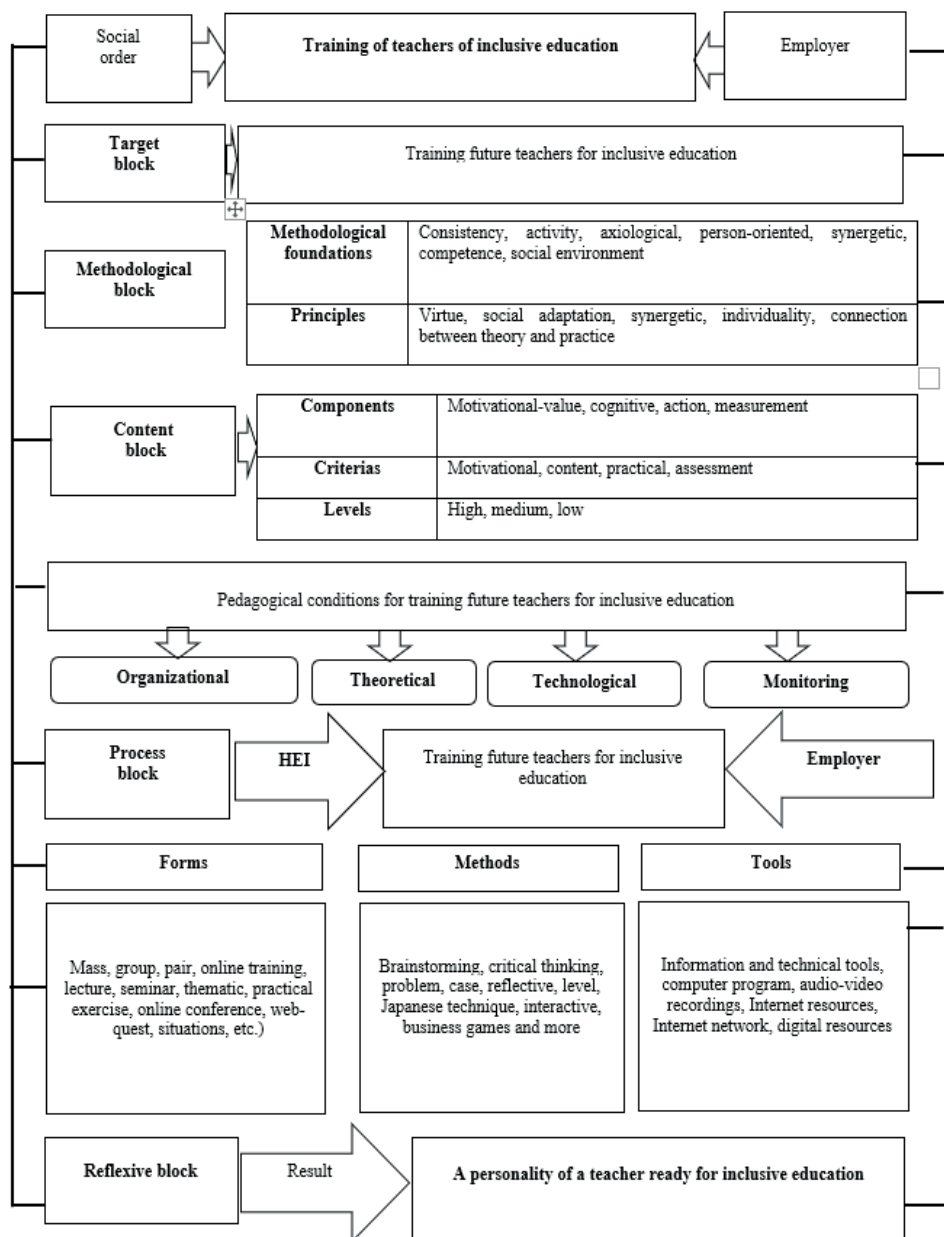


Figure 1 - Structural model of teacher training for inclusive education

The structural model of training teachers for inclusive education proposed by us was tested according to motivational-value, cognitive, action and measurement criteria.

Indicators on the motivational-value criterion are with the survey “Methodology of self-assessment of professional pedagogical motivation” by N.P. Fetiskin, on the cognitive criterion “Methodology for diagnosing the level of self-development and professional pedagogical activity” by L.N. Berezhnova, a survey consisting of 17 questions, action criterion indicators with V.Sinyavskiy and B.A. Fedorishyn’s questionnaire containing 40 questions on “Methodology for assessing the communicative and organizational abilities of a person” and dimension criterion with O.S. Kuzmina’s “Assessment of the ability to solve professional tasks” and “Assessment of the results of student activities” methods, as well as the “Readiness for inclusive education” survey were conducted. Training tools for future teachers for inclusive education were compiled, educational-methodological complex was prepared, effectiveness was checked through practical and experimental works. Practical experiments were conducted with 146 students of M. Auezov South Kazakhstan University, Kozha Ahmet Yassauy International Kazakh-Turkish University, Kazakh National Girls’ Pedagogical University. A plan of practical-experimental works was created, goals and tasks were determined. The definition period, formation period and control periods of the experiment were determined. The tasks of each stage have been defined.

In the defining period of the experiment, it was considered that the readiness of students in the experimental group and the control group for inclusive education is at a medium and low level. Therefore, in order to correct this shortcoming, the elective course “Professional training of persons with disabilities due to health” was developed, a training-methodical complex was created. In order to prepare the future teachers for inclusive education, the proposed teaching-methodical tools and teaching-methodological complex were tested in practice. As a result of the formation experiment, future inclusive education teachers-scientists in the experimental group demonstrated the need to use various scientific positions, principles, methodologies, methods, tools, and forms in future professional activities, as well as the purposeful, systematic study of pedagogical reality and their activity in mastering new knowledge. At the same time, during the formation experiment, the level of preparation of the experimental group of future teachers for inclusive education increased.

Fisher’s test was used to compare experimental and control groups. The criterion evaluates the validity of the differences between the percentages of the two samples of interest. The value of Fisher’s angular transformation is the conversion of a percentage random sample to the magnitude of the central angle measured in radians. A large percentage corresponds to a large angle ϕ , and a small fraction corresponds to a small angle, but the relationship here is not linear: $\phi = 2 \cdot \arcsin(\sqrt{P})$, where P is the percentage.

The value of the criterion increases with an increase in the distance between the angles ϕ_1 and ϕ_2 and with an increase in the number of samples. The larger the value of ϕ^* , the more reliable the differences.

We used Fisher’s F test to analyze the results. Fisher’s angular transformation coefficient (ϕ^* dimension values) was used. We calculate the coefficient of Fisher’s angular transformation with the following formula:

$$\varphi = (\varphi_1 - \varphi_2) \times \sqrt{\frac{n_1 \times n_2}{n_2 \times n_2}} \quad (1)$$

Here,

φ_1 - the great value of the indicator of readiness for inclusive education of future teachers;

φ_2 - the value of the minimum indicator of the obtained data;

n_1 - number of control 1;

n_2 - number of control 2.

Fisher's φ^* criterion showed that it is sufficient to provide the educational and methodological complex of pedagogical conditions created for the preparation of future teachers for inclusive education in the dual education system. It was found that there are significant differences in the performance of the students of the experimental group and the control group participating in the experiment. These differences are visible at high ($\varphi^* = 1.64$) and medium ($\varphi^* = 2.28$) levels. The results of calculations based on Fisher's φ^* criterion showed that sufficient conditions have been created for the training of future teachers who teach inclusively in the dual education system.

According to the second condition, Fisher's criterion made it possible to compare the values of sample variances of two series of observations. According to the condition of the criterion, the value of the numerator of the fraction must be greater than or equal to the value of the denominator, so the value of F_{emp} is always $F_{\text{эм}} \geq 1$.

We calculated the p-level of future teachers' readiness for inclusive education based on the following formula:

$$X^2 = \sum_{i=1}^n \frac{(f_{ij} - f_{jm})^2}{f_{jm}}, df = (k - 1)(m - 1) \quad 2)$$

At the end of the experiment, according to the data, it was observed that the readiness of the students of the experimental group for inclusive education increased. Thus, during the experiment, it was shown that the level of training of inclusive education teachers is related to their acquired knowledge, business and skills.

Preparation of future teachers for inclusive education:

- *motivational-value component* (understanding the meaning of the profession, understanding the social importance of the profession, interest in the profession, etc.);

- *cognitive component* (knowledge of regulatory documents, laws, curriculum documents, methodological instructions);

- *action component* (readiness for professional relations, ability to manage the work, organize, plan the work, adapt professional activities to requirements, etc.);

- we determined the *dimensional component* (analysis of the results of the work, the level of preparation of the future teacher for inclusive education).

The conducted experiment showed that the level of preparation of educators for inclusive education is related to their acquired knowledge, ability and skills.

Table 2 - Dynamics of future teachers' readiness indicators for inclusive education

Criteria	Levels	Control group		Experimental group	
		Begin of the experiment	End of the experiment	Begin of the experiment	End of the experiment
Motivational and value	High	18,93 (14)	47,30(35)	23,62 (17)	30,56(22)
	Medium	45,94 (34)	50,00(37)	44,44 (32)	45,83 (33)
	Low	35,13 (26)	2,70(2)	31,94 (23)	23,61(17)
Cognitive	High	16,22 (12)	35,14(26)	15,28 (11)	20,84(15)
	Medium	50,00 (37)	52,70(39)	50 (36)	54,16(39)
	Low	33,78 (25)	12,16(9)	34,72 (25)	25,00(18)
Action	High	-	32,43(24)	-	8,34 (6)
	Medium	29,73 (22)	55,41(41)	29,17 (21)	47,22(34)
	Low	70,27 (52)	12,16(9)	70,83 (51)	44,44 (32)
Dimensional	High	14,86 (11)	31,08(23)	12,51 (9)	16,67(12)
	Medium	52,70 (39)	56,76(42)	51,38 (37)	56,95(41)
	Low	32,44 (24)	12,16(9)	36,11 (26)	26,39(19)

Based on the results of the conducted experiment, we described the levels of preparation for inclusive education of future teachers as follows:

Table 3 - Description of future teachers' readiness levels for inclusive education

Components	Criteria	Readness level		
		High	Medium	Low
Motivational and value	Motivational	Fully understands the importance and value of inclusive education, the motives and interests of methodical activities aimed at developing the process of inclusive education; - high empathic and emotional readiness to competently solve problems in working and communicating with students with disabilities and their parents (families) arising in the educational process of the higher school	Understands the importance and value of inclusive education, the motives and interests of methodological activities aimed at developing the process of inclusive education, but is not motivated to take into account these features; - lack of empathic and emotional preparation to competently solve the communication difficulties arising in the educational process of the higher school	Does not understand the importance and value of inclusive education, the motives and interests of methodical activities aimed at developing the process of inclusive education; - low empathic and emotional readiness to competently solve difficulties in working and communicating with disable students and their parents (families) arising in the educational process of higher school
Cognitive	Content	Has mastered the content of knowledge about inclusive education. Knows the meaning, methods and forms of inclusive education. Has professional skills and acquired systematic knowledge. Shows creative activity in applying new knowledge	Has mastered the content of knowledge about inclusive education. Understands the essence, methods and forms, process of inclusive education. Has business skills and is systematic. There is an active application of new knowledge	Has not fully mastered the content of knowledge about inclusive education. Has a superficial understanding of the methods, forms, and process of inclusive education. Has professional skills, but lacks systematic skills. The activity of using new knowledge is low

Action	Practical	Shows creative activity in inclusive education. Psychologically well prepared. Has a high ability to perform the function of a future vocational training teacher in pedagogy, methodology, technology, professional field. Uses methodological knowledge and skills creatively in the presence of pedagogical activity	Activity in inclusive education is medium. Psychologically ready. The ability to perform the function of a future vocational training teacher in the field of pedagogy, methodology, technology, professional field is average. Uses methodological knowledge and skills in pedagogical activities	Inclusive education activity is low. Is not psychologically prepared. The ability to perform the function of a future vocational training teacher in the field of pedagogy, methodology, technology, professional field is average. Uses methodological knowledge and skills in pedagogical activities
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Conducted experimental work was determined according to motivational-value, cognitive, action, size components, the results were analyzed. Implementation of the content and methodology of improving professional qualifications in the field of inclusive education has increased the quality of improving professional qualifications of teachers-educators. This conclusion was reliably proved by the results of the experiment conducted on the basis of comparison of the professional qualifications of the educators in the experimental and control groups.

Conclusion

Currently, inclusion in public relations and inclusion in the field of education is being implemented as a leading ideology for persons with disabilities due to health. Training of specialists for inclusive education is one of the conditions for implementation of inclusion. The problem of preparing future teachers for inclusive education is causing difficulties in terms of organizational and methodological support, because they do not understand the specifics of working with people with disabilities. Since the future teacher of inclusive education has to work in difficult conditions, we offer a structural model of training teachers for inclusive education.

The model we have created is a holistic, open, dynamic education and makes it possible to make the process of preparing future teachers for inclusive education purposeful, to determine the correspondence of the goal to the final result.

In order to train highly qualified specialists who are ready to work in an inclusive environment, the structural model of training future teachers for inclusive education, created on the basis of systematic, active, axiological, person-oriented, synergistic, competence, and social environment foundations, is a wide-ranging, complex and multi-faceted model for solving the problem of training teachers and higher education. We believe that it will be the basis for new researches in the direction of professional training of educators.

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