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Training Future Physical Education Teachers for Professional Activities under the Conditions of Inclusive Education

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Abstract: *According to the concept of developing inclusive education, the process of introducing inclusion in schools has been intensified. This is due to the training of physical education teachers to work with children with special educational needs during specially organized courses, whose fragmentation has not greatly increased the level of teachers' qualifications. The research aims to scientifically justify theoretical and methodological foundations, develop and experimentally verify the methodology of training future physical education teachers for professional activities under the conditions of inclusive education, taking into account the specifics of their psychological, theoretical and practical readiness for it. Pedagogical conditions for training future physical education teachers for professional activities under the conditions of inclusive education are defined as follows: prioritizing the content of programmes and teaching methodology; improving the content, forms, methods and means required to master normative, psychological, pedagogical and correctional theoretical and practical and scientific foundations of inclusive education, as well as didactic and correctional and developmental technologies during the classes dedicated to professional teaching methodologies; consolidating professional knowledge and practical skills of students based on the simulation modelling and reflection on pedagogical experience of future physical education teachers under the conditions of inclusive education with the relevant update of the content of teaching placements. The experimental work involved 444 students majoring in physical education and sport (222 students in the experimental and the control groups). Given the summarized data of final tests, it becomes clear that the students in the EG tend to have a high level of such readiness (at the ascertaining stage – 28.6%, at the formative stage – 47.0%, the difference being 18.4%). The results of the experiment prove the effectiveness of introducing the developed methodology of training future physical education teachers for professional activities under the conditions of inclusive education.*

Keywords: *training stages, pedagogical conditions, school, pupils, educational subjects.*

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Introduction

International documents testify to the third world trend of inclusive education aimed at involving children, young people and adults with special needs to obtain lifelong learning without limiting any access to it (Adăscăliţei, 2020; Frumos, 2018; Stăncescu et al., 2020). Significantly, this trend in foreign theory and practice now has a certain scientific basis, whose leading category is a clear definition of the concept of inclusive education as joint education programmes and upbringing of children with normal and impaired development without any conditions and restrictions.

The article aims to scientifically justify theoretical and methodological principles, develop, and experimentally verify methods of training future physical education teachers for professional activities under the conditions of inclusive education, taking into account their psychological, theoretical and practical readiness for it.

Accordingly, the objectives of the article are as follows:

to generalize the concept of an inclusive learning environment;

to determine the conditions of inclusive education accessibility in school and the requirements for an inclusive learning environment;

to identify and study the current use of a neuropsychological approach in practical training of future physical education teachers;

4. to scientifically justify pedagogical conditions for training future physical education teachers to work with pupils in an inclusive learning environment;

5. to develop and validate a model of a pedagogical system for training future physical education teachers to work with pupils in an inclusive learning environment;

6. to identify levels of future teachers' readiness for professional activities under the conditions of inclusive education.

The scientific value of the article lies in determining and justifying pedagogical conditions for training future physical education teachers to work with pupils in an inclusive learning environment (the inclusive-pedagogical focus of professionally oriented courses; the focus of students' practical activities on health promotion among pupils with special needs) and applying current achievements of neuropedagogy and neuropsychology.

In the second half of the 19th century, many prominent researchers, educators, and physicians actively discussed the issues of "comprehensive and harmonious development of the younger generation", and the positive impact of motor actions which "prevent the diseases of the soul and body. They also highlighted the need to know "30 rules of physical education" and

"the most rational rules of hygiene" for those who will educate the younger generation. Besides, they already talked about the creation of special institutions to train physical education teachers to work with pupils during classroom and extracurricular hours. The problem of training specialists to preserve health, especially physical, with the help of sports, exercise and games came into focus already in the late 19th century (Shchekotylina, 2019).

At the same time, Ivanova (2006) claims that when we strengthen the health-promoting function of physical education in secondary schools (reflected in standards for motor modes of 12-year school education, three physical education lessons per week for all grades, use of a differentiated approach to different groups of pupils), we create a health-promoting learning environment. Therefore, it is vital to modernize professional training of future physical education teachers in higher education institutions and focus it on the development of creative specialists who can act as coordinators of health education.

It must be noted that correctional and health-promoting activities in primary schools constitute a specially organized pedagogical process that covers learning and daily activities of pupils. In turn, this process aims to correct and reduce deviations in pupils' psychophysical state and help them to adapt and socially integrate into the school environment. The authors of the article believe that correctional and health-promoting activities form the basis for organizing inclusion in school.

Still, studies on professional training of physical education specialists for professional activities in the context of inclusive education began to be conducted much later. Besides, they emerged due to the general trend towards global democratization. Therefore, the concept of inclusion was introduced into the theory and policy of education only in the 20th century. Indeed, inclusive education is the first step towards achieving the ultimate goal, which is the creation of an inclusive society that will allow all children and adults, regardless of gender, age, ethnicity, ability, presence or absence of developmental disorders and HIV, to participate fully in society and contribute to it.

One can observe how the Ukrainian society is becoming more and more aware of the ideas of inclusive education, which only indicates its democratization. This is due to a change in the public consciousness, i.e., the conscious acceptance of humanistic values, elimination of socio-psychological barriers in the interaction between people with special needs and people without physical disorders, formation of tolerance as a basic principle of social interaction following the diversity of lifestyles.

Analyzing inclusive processes, many scholars rely on the multifunctional nature of research. In turn, they believe that a socio-pedagogical approach is expressed in understanding the nature of the child, the experience of his or her sensory life through a socially determined spatio-temporal linguistic environment (Nazarova, 2011). After all, an inclusive learning environment seems quite optimal for children with special needs. Another, personalistic, approach combines several areas. One of them is humanistic psychology (Kurth & Mastergeorge, 2013). Also, one should consider the social theory of autopoiesis. Its essence is the need to provide each child with an individual educational route focused on active communicative interaction with the social environment to verify the adequacy of acquired knowledge and skills. Given these concepts, inclusive education is implemented through a specially built individual educational route (Nazarova, 2011). The authors of this article support this area of social theory and, at the same time, emphasize the problems related to its practical implementation in Ukrainian schools. These problems begin with the fact that about 60% of parents still do not consider their children as those with special needs. Consequently, it makes it impossible to carry out a comprehensive assessment and corrective work. Besides, there is a lack of relevant specialists, such as a teacher's assistant, speech therapist, special education teacher, psychologist.

The analysis of scientific works (Gilman, 2009; Litvintseva, 2011) shows that the organization of inclusive education in the theory and practice of foreign countries is aimed at forming inclusive culture in schools, which is based on the acceptance of children with special needs, as well as the philosophy of involving them in the educational process together with their peers with normal development. Such scholars as Kolupaieva (2009), Kuzava (2015), Maksymchuk et al. (2020) and others have proved the need to create additional resources and appropriate educational conditions for the education of such children. Based on the works of Nerubasska & Maksymchuk (2020), Melnyk et al. (2019), it is found that the individual characteristics of younger pupils determine their educational needs, whose knowledge is a prerequisite for the effective organization of the educational process in educational institutions.

At the same time, the potential of "traditional" psychology of learning and physical education is insufficient to organize an effective educational process for children with special needs, given the development of their cognitive and emotional-personal spheres.

An individual approach to learning and development of such children, required for both children with developmental disorders and

children without them, considers the peculiarities of cognitive activity, as well as the knowledge about "strengths" and "weaknesses" of mental development. As noted by Vygostky (1983), it is essential to identify potential resources and characteristics, which can be the basis for children's further learning and development, to select a diagnostic approach to assessing their development. Importantly, it is a neuropsychological approach that enables the analysis of the strengths and weaknesses of the child's psycho-physiological functions (Myhydiuk, 2019).

Both democratization and humanization of public life are reflected in several international legal acts, which have laid down the basic principles and approaches to the implementation of inclusive education worldwide.

The legal side of inclusive education development is closely related to international acts and resolutions. In March 1990 in Jomtien (Thailand), they adopted World Declaration on Education for All (United Nations, 1990). This document sets out clear lines of action and measures to achieve the goals of Education for All (EFA). The key aspects and principles of the Declaration include universalizing access and promoting equity, focusing on learning, broadening the means and scope of basic education, enhancing the environment for learning, strengthening partnerships (Akhmetova, 2013).

Indeed, since the proclamation of the provisions of the Salamanca Statement (Centre for Studies on Inclusive Education, 1994), they have employed the concept of children with special needs, which subsequently acquired some psychological and educational content characteristics and was, somewhat, replaced with the concept of children with special educational needs. There was a shift of accents from the disadvantages, defects, disorders, deviations from the norm of the child's development to his / her needs for special conditions, methods and means of education and correction of development. Modern scholars (Gerasymova et al., 2019; Kolupaieva, 2012; Myronova et al., 2010; Malofeev, 2007; Sheremet et al., 2019; Shipitsyna, 2002) described pupils with special educational needs and found that it was expedient to designate all children whose personal development was outside the generally recognized norm and could be accelerated, delayed, somewhat or significantly impaired.

Building on the results of nine preparatory meetings and four regional conferences on inclusive education organized by the UNESCO International Bureau of Education, as well as their plenary sessions and discussions, Member States agreed to use inclusive education in planning, implementing, monitoring, and evaluating education policy. It is considered as a way to further accelerate the achievement of the EFA goals and promote a more inclusive society. In this regard, a broader understanding of

inclusive education can be seen as a guiding principle for supporting education for sustainable development, lifelong learning and providing equal educational opportunities for all segments of society (Zagumennov, 2009).

Thus, in recent decades, global humanization and democratization of society in both developed and developing countries have influenced research to improve the training of future physical education teachers by enabling comprehensive personalization of young people's physical improvement, given the conditions of implementing inclusive education and applying neuropedagogy and neuropsychology.

To meet the needs of children with special educational needs, an appropriate inclusive educational environment is needed, that is a set of organizational, physical, psychological and pedagogical and social conditions created in the educational institution to ensure the effectiveness of educational and correctional and developmental processes, which depend on its accessibility, quality of services provided, social-psychological climate in the team and the teachers readiness for educational activities under the conditions of inclusive education.

The accessibility of inclusive education in schools consists in the following aspects: legal aspect – the possibility of obtaining education is legally guaranteed; economic aspect – financial satisfaction of the child's educational needs; organizational aspect – the expansion of a network of educational institutions with inclusive education, located close to the child's place of residence and with the appropriate universal design, the functioning of the school bus system, the presence of barrier-free infrastructure, qualified defectologists, speech therapists, psychologists, social educators, teacher assistants and special equipment according to nosology; content aspect – the adaptation and modification of the content of education coherently to the physical and mental capacity of the child; technological aspect – an active use of innovative pedagogical, information and communication, psychological, social, medical and rehabilitation technologies, taking into account the individual characteristics of different categories of children with special educational needs.

The quality of providing both basic (education, upbringing and development of pupils in class and after-hours) and additional (strengthening the correctional and developmental component of the educational process and ensuring psychological, pedagogical, medical and social support of inclusive education) educational services in inclusive schools is determined by the conditions of educational environment, education content, teaching and effectiveness of the educational process.

Also, one of the prerequisites for education quality under inclusion is the introduction of a neuropsychological approach to professional training of future physical education teachers. It is especially relevant to Ukrainian society (Akhutina & Pylayeva, 2003).

A common use of a neuropsychological approach in physical education is associated with several reasons. First, "innovative technologies" of teaching and learning, widely discussed in the psycho-pedagogical literature and practically implemented in the educational process, are no longer the latest pedagogical discoveries that guarantee high educational attainment and physical development of children. Second, the social and cultural environment, as well as the conditions for learning and physical education, has changed almost completely, qualitatively, and quantitatively. Indeed, today's information age provides children with many alternative ways to obtain information and spend free time. Third, the school curriculum requires first-graders to have certain skills that must be developed already in preschool.

However, society is constantly raising the requirements for learning and educational levels. On the one hand, it strengthens education. On the other hand, it deteriorates the mental and physical health of children. High educational requirements for the relatively unformed child brain increase the risk of psychosomatic diseases, emotional and behavioural disorders. Therefore, neuropedagogy, as learning and upbringing of children under brain activity patterns together with comprehensive physical development, is seen as an option of using a neuropsychological approach in school practice (Glozman, 2016). This area is an example of productive interaction between neuropsychology and pedagogical theory and practice of introducing innovations in physical education of pupils within inclusive-oriented education.

The creation of a positive social and psychological climate within the school staff as a condition of inclusive education aims to consolidate, stimulate, stabilize and regulate the activities of its members on such bases as confidence and high demand, friendly and business criticism, free expression of their opinions, lack of pressure, sufficient awareness of the state of affairs, satisfaction from cooperation, emotional interaction and mutual assistance, respect and self-expression. The main mechanism for creating conditions for inclusive education in schools is the activities of the administration and the work of an interdisciplinary team, where a key role is played by a physical education teacher, who qualitatively performs an expanded range of professional activities.

According to the results obtained from a series of diagnostic tasks at the ascertaining stage of the experiment, it is found that 28.6% of students in the EG and 29.5% of students in the CG were at a high level of readiness for professional activities under the conditions of inclusive education. The overwhelming number of students was at average and low levels: an average level in the EG – 35.4% and the CG – 34.9%; a low level in the EG – 36.0% and the CG – 35.6%.

All this convincingly proved the students' lack of readiness for professional activities under the conditions of inclusive education and confirmes the need to justify the methodology of training future teachers for professional activities under the conditions of inclusive education.

Materials & methods

To fulfill the set objectives, a set of methods was used at various stages of scientific search: theoretical methods: comparative analysis and synthesis of philosophical, educational, historical, psychological, social, inclusive, correctional and pedagogical literature to clarify the main concepts and categories; analysis of the national and foreign experience, regulatory framework and guidance documents on inclusive education in higher and general education institutions to generalize and define conceptual approaches to educational inclusion; classification, structuring and systematization of pedagogical phenomena to build a coherent pedagogical system, which helps to increase future teachers' readiness to work under the conditions of inclusive education; logical and semantic justification and designing to develop a model of pedagogical system for training future physical education teachers; prediction and objectification of the course and effectiveness of the educational process in higher education; empirical methods: psychological and pedagogical diagnostics (observation, discussions, questionnaires, tests, expert evaluation of the educational process, self-evaluation) to determine the levels of readiness of future physical education teachers for professional activities under the conditions of inclusive education based on the results obtained from placement and final tests, the pedagogical experiment (ascertaining and formative stages) to determine the effectiveness of the developed model of pedagogical system for training future physical education teachers; statistical methods: analysis and interpretation of the obtained results, quantitative processing and comparison of the obtained experimental data (testing null and alternative hypotheses according to the Fischer's criterion) to prove the accuracy of the facts raised to increase students' readiness for professional activities under the conditions of inclusive education.

The experimental work was conducted at Pavlo Tychyna Uman State Pedagogical University, Kherson State University, Izmail State University of Humanities, Mariupol State University. It involved 444 students majoring in physical education and sport (222 students in the experimental and the control groups). Such a large volume of research samples will allow obtaining the most reliable results of diagnostics.

The experimental model of the pedagogical system consisted of **three interrelated stages**, namely motivation and values, theory and practice, simulation and reflection.

The first stage aimed to ensure students' positive attitude towards interiorization, internalization and identification of values of inclusive education and intensification of their interest in professional activities, which implies a set of tasks corresponding to the criteria of the missionary component of students' readiness for professional activities under the conditions of inclusive education. The peculiarity of the formative experiment is presented in the following sequence: "I recognize the value of inclusion" → "I accept differences in the development of children" → "I feel the need for new knowledge and skills". The accomplishment of these tasks was facilitated by the provision of integrative links between pedagogical and inclusive components of the content of professional training while studying such courses as philosophy, the history of Ukrainian culture, the history of pedagogy, didactic, theory and methods of education. Lectures, seminars, practical and laboratory classes, as well as students' independent and extracurricular activities, have become the main organizational forms of study at universities.

Due to the course on philosophy, future teachers had the opportunity to learn such additional topics as "The Philosophy of Inclusive Education in the System of Social Values", "Axiological Approach to Inclusion and Social Integration as a Whole", "Values of Educational Inclusion for the Development of Society", "The Principles of Inclusive Education in an Axiological Context".

Also, they were able to trace the cultural and historical retrospective of developing public recognition of an individual with developmental disabilities and relevant educational paradigms due to the course on the history of Ukrainian culture, including such topics as "The Culture of Kievan Rus. Christianization of Rus and Its Importance for the Development of Ukrainian Culture", "Ukrainian Culture in the Second Half of the 14th Century – the First Half of the 18th Century", "Ukrainian Baroque of the Middle 17th Century – the Early 18th Century", "Ukrainian Culture of the 18th and 19th Centuries", "Ukrainian Culture of the Soviet

Era", "Ukrainian Culture when Overcoming the Effects of Totalitarianism of the Late 1980s – the First Decade of the 21st Century". At the end of the course, students' work on the joint project, titled "Famous People with Special Needs" involved seeking information on innovations and achievements in different spheres of the culture of people with special needs. This information was organized in a chronological order and presented at a student round-table discussion on "Equals among Equals", during which the issues of cultural aspects of involving people with special needs in various spheres of public institutions were discussed, as well as the reports prepared based on the materials of the web-site "Ukraine without Barriers" and the All-Ukrainian Fund "Step by Step", etc.

Such courses as the history of pedagogy, didactic and theory and methods of education contributed to revealing the complexity and versatility of physical education and the depth of its content, as well as to understanding the values of inclusive education. With the help of the history of pedagogy, students became acquainted with the peculiarities of development of joint education programmes and upbringing of children with different levels of development on the examples of the Paris Department for the Deaf at district schools, the Russian children's clubs "Settlement", "Children's Work and Leisure" and the labour colony "Cheerful Life", F. Dostoevsky's school, the Dzerzhinsky commune, outpatient medical courses, experimental study of the blind girl Roza Zolotnitskaya in a mass school (also blind from birth, 1928) et al.

The course on didactic was focused on theoretical and practical foundations of organizing joint education for children with different levels of development, taking into account the principles of integration and differentiation. Supplementary lectures were chosen to be the most effective form of such education since it helped to increase students' motivation to acquire didactic knowledge. During theoretical sessions, the audience is involved in the active understanding of the problems raised through individual supplementary speeches: interesting facts, useful information, examples of innovative pedagogical experience and modern achievements in the field of pedagogy. This type of classroom activity is closely related to interactive learning (learning-by-teaching) since students are allowed to participate in learning and transfer knowledge to their peers.

The inclusive and pedagogical focus of the course on theory and methods of education implied future teachers' awareness of the values of inclusive education. Seminars in the form of a show much contributed to increasing students' interest and motivation towards educational work under the conditions of inclusive education. Thus, they familiarized themselves

with educational activities for children with special educational needs and acted as their "directors". The lesson on the topic "Collective Creative Activities of Young Pupils with Special Educational Needs" was prepared by students on the basis of Internet sources, namely the following videos about educational events held in Ukraine: "Day of Persons with Disabilities", including creativity festivals for children with special needs "The Rainbow of Talents" (Krasyliv), "The Joy of Childhood" (Khmelnytskyi), "Let's Believe in Ourselves" (Kyiv), "The Wind of Action" (Lviv), "Believe in Yourself" (Kherson); exhibitions "Colours of the World of Silence" (Kyiv), "White Rainbow" (Kharkiv), "The Hope of Otynia" (Otynia, Ivano-Frankivsk region); competitions "Pokrovsky Games" (Kyiv), "Sport for Everyone" (Ivano-Frankivsk), "The Source of Hope" (Izmail); flashmobs "Open Your Hand" (Uman), "Believe in Yourself, and Others will Believe in You" (Cherkasy), "A Living Heart" (Odesa), "The World is Equal for Everyone" (Dnipro); promotions "Good will Save the World" (Uman), "Children of the Sun" (Zhytomyr), "A Fur Tree of Mercy" (Kyiv), etc.

The presented video materials were verbally supported with comments. Future teachers also realized the importance of such kind of educational work as collective creative activities for children with special educational needs, educators, parents and the community. In their free time, students organized the event, called "Uman Students in Blue" dedicated to the World Autism Awareness Day held on April 2. It was aimed at raising public awareness of the problem of children and young people with autism, building tolerance and raising awareness of autism. Several activities have also been organized to support inclusive programmes for children and young people with autism, cultivating a humane and value-oriented attitude towards students with special educational needs.

The pedagogical condition, which was realized at the motivation and values stage, implies *prioritizing the content of programmes and teaching methodology* of such courses as philosophy, the history of pedagogy, the history of Ukrainian culture, didactic, theory and methods of education so that students can acquire the axiological principles of inclusive education.

The second stage aimed to help future teachers acquire theoretical, scientific and practical foundations of inclusive education in schools. The objectives of this stage included correcting and systematizing the content of inclusion-oriented courses (bachelor programmes), developing an experimental curriculum of the course on inclusive pedagogy of physical education and updating the content of optional courses; optimizing research and independent work of students (preparation of reports, course papers and qualification research, projects, presentations with reports, participation

in meetings of research laboratories, scientific conferences, seminars on certain issues of inclusive education). These objectives were based on such courses as political science, fundamentals of medical knowledge and health care, developmental and pedagogical psychology, pedagogical skills, fundamentals of defectology, fundamentals of correctional pedagogy, fundamentals of inclusive education and professional techniques (three or four courses within bachelor programmes), whose content included additional topics or issues of inclusive education. This has ensured an integrative link between the pedagogical and inclusive components of professional training for future physical education teachers.

Traditional forms (lectures, seminars, laboratory work and tutorials) and informative, explanatory, summarizing and evaluation methods of theoretical and practical training were employed to enhance the level of professional, methodological and psychological readiness of future physical education teachers to perform an extended range of professional functions under the conditions of inclusive education. The quality of the educational process was much contributed by problematic lectures with the use of such interactive exercises as "Microphone", "Incomplete Sentences", "Working in Groups", "Discussions", "The Decision Tree", "Learning-by-Teaching", "Working in Pairs", etc.

The course on fundamentals of medical knowledge and health care covered such topics as "Characteristics and Prevention of Psychoneurological Disorders, Hearing and Vision Problems in Children", "Musculoskeletal Disorders in Children, Its Causes and Prevention", "Pre-Doctor Care in Case of Accidents and Emergencies". During lectures, seminars and practical classes, students were acquainted with the sanitary and hygienic conditions of general educational institutions with and without inclusive education, as well as the characteristics of pre-doctor care for children with special educational needs. During the extracurricular time, a mini-conference on the topic "Sanitary-Hygienic and Health-Saving Conditions in a School for Children with Special Educational Needs" was organized and held with the participation of teachers and students, physical education teachers, specialists from special schools, orphanages, rehabilitation and psychiatric centres.

The course on developmental and pedagogical psychology paid much attention to the study of psychological characteristics and general patterns in personality development of young pupils, their typical individual traits, which should be taken into account when organizing the educational process for children with different levels of development. The students were involved in a mini-training, titled "Training Exercises for Developing

Teacher's Pedagogical Communication Skills". These exercises were supplemented by such game improvisations as "One Hundred Balls", "A Letter Card", "Australian Rain", "Empathy", "Camomile", "Unison", "The Verbalization of Feelings" to teach students to communicate and interact with children with special educational needs.

Such courses as teaching Ukrainian teaching methods, math teaching methods, environmental studies teaching methods, fine arts teaching methods, music teaching methods, practical training in crafts rather contributed to forming students' ability to effectively apply modern didactic, correctional and developmental technologies in future professional activities. At the same time, university teachers were provided with relevant materials for methodical support of the educational process, namely the textbook on didactic, correctional and developmental technologies of inclusive physical education. During lectures, future teachers had the opportunity to gain the necessary knowledge about the forms, methods, techniques and means of organizing the educational process under the conditions of inclusive education. Practical classes and, especially, workshops, much facilitated their understanding of pedagogical (traditional intensive learning, differentiated learning, formation of cognitive strategies, developmental and interactive learning, creation of successful situations) and correctional technologies (gaming technologies, art therapy, logarithmic forms of learning and methods of alternative and additional communication). Some interactive methods ("The Carousel", "Brainstorming", role-playing and business games) and project-based technologies (lesson planning) were used to enhance students' educational activities, focused on the application and acquisition of the existing and new knowledge and skills.

The course on inclusive pedagogy of physical education has been developed. Its content is focused on theoretical, methodological, organizational and practical aspects and is implemented in the following modules: "Methodology of Inclusive Pedagogy", "Inclusive Didactic of Physical Education, "Inclusive Education of Young Pupils", "Inclusive Physical Education". This course was taught with appropriate educational and methodological support. The knowledge, abilities and skills students acquired during this course are directly related to the organization of an inclusive environment in schools, the selection of content, forms and methods of learning, upbringing and development of young pupils with and without special education needs; the establishment of tolerant relations between the participants of the inclusive educational process under the conditions of inclusive education and the creation of favourable psychological and pedagogical conditions for the interaction between

children with different levels of development to prevent the emergence or elimination of already existing factors that can destabilize their comprehensive development.

The optional course on the psychology of creativity was supplemented with the content module, titled "Creative therapy" to enrich the content, forms and methods of correctional and pedagogical work with pupils with and without special educational needs. It was aimed at teaching students about the specifics of creativity as a means of psychotherapeutic assistance to the participants in the educational process and helping them to acquire methodical knowledge and practical skills of using creative therapy in psychological, pedagogical, correctional and developmental work with pupils with and without special educational needs. The module covers the following topics: "Creativity as a Means of Psychological Assistance to Young Pupils", "The Content, Forms and Methods of Creative Therapy in Psychological and Pedagogical Support of the Comprehensive Development of Young Pupils with and without Special Educational Needs", "The Most Common Techniques of Visual Therapy in Psychological and Pedagogical Support of Young Pupils in an Inclusive Environment". It also involves performing such thematic tasks as "The Self-Image. Draw Your Name", "The Mandala of My Body", "The Star of Feelings", "The Next Generation – the Pictures of Hope", "My Guardian Angel", "Sand Paintings", "Paper Sculptures". All this was aimed at correcting and harmonizing the personal development of future teachers and revealing their creative potential.

The outlined objectives of this stage have been realized through such ***a pedagogical condition*** as *improving the content, forms, methods and means* required to master normative, psychological, pedagogical and correctional theoretical and practical and scientific foundations of inclusive education due to the courses on developmental and pedagogical psychology, political science, pedagogical skills, fundamentals of medical knowledge, fundamentals of defectology, fundamentals of correctional pedagogy, fundamentals of inclusive education and didactic, correctional and developmental technologies during the classes dedicated to professional teaching methods.

The third stage aimed to involve future teachers in real-life professional activities and active reflection of pedagogical experience under the conditions of inclusive education and was specified with the tasks based on the self-regulatory component of professional readiness. During their implementation, the methods of contextual learning were used. Procedurally, this process followed the author's algorithm of real-life training while students were mastering the course on inclusive physical education. It

included seven sequential schemes of modelling pedagogical activities of physical education teachers under the conditions of inclusive education: 1) a certain problem (students were supposed to understand the reasons for diagnostics of young pupils' psychophysical development, determine its goals, tasks, criteria, choose research methods and prepare a plan of such diagnostics); 2) team collaboration of specialists (a team of specialists developed an individual programme for development and provision of educational services for each child); 3) pedagogical knowledge (students were encouraged to learn the basic concepts of teaching methods, which are based on the principles of personality-oriented and competency-based approaches); 4) a pupil (future teachers needed to learn how to evaluate pupils' creative skills, motivation towards artistic activities and their involvement in them); 5) a teacher (future teachers needed to justify their sets of criteria for future physical education teachers' readiness for professional activities under the conditions of inclusive education and determine the most optimal of them based on their cooperation with the university teacher); 6) a pedagogical analysis of the problem (the problem is raised not by the university teacher but by the students who actualize pedagogical knowledge when analyzing the practice of implementing inclusive education in schools); 7) an interpretation of traditions and innovations (when students were studying the methods and organizational forms of inclusive education in schools, they not only familiarized themselves with the best practices but also clarified the need to promote new methodological innovations in the field of inclusive education, generate their creative ideas in the development of fragments of a lesson and educational events).

The content of teaching placement has been updated, too. It was aimed at using scientific and theoretical knowledge, practical abilities and skills acquired by students in the process of studying pedagogy, psychology, professional methodologies and special courses in inclusive education in pedagogical activities. Besides, it contributed to their mastering of modern forms and methods of the educational process in schools with inclusive education, increasing their interest in professional activities, as well as cultivating the need to systematically update their knowledge and strive for professional self-development and self-improvement. During teaching placements, students collected materials for a portfolio of pupils taking into account personal ("My Family and I", "My Friends and I", "My Pets and I", "My Hobbies", "My Wishes", "My Learning Expectations"), educational (fixed educational and creative achievements, participation in competitions, olympiads, tournaments in the form of gratitude, certificates, photos of

prizes and results of club or studio work), reflexive and prognostic ("Wishes for Myself", "What do I Do to Achieve Changes", "How I See My Future", "Whom I Want to Become", etc.) thematic blocks, which was a clear demonstration of student collaboration with teachers, pupils and their parents.

At the simulation and reflection stage, **the third pedagogical condition** was realized. It *implies consolidating professional knowledge and practical skills* of students through mastering such optional courses as inclusive physical education, the psychology of creativity based the simulation modelling and reflection on the pedagogical experience of future physical education teachers under the conditions of inclusive education with the relevant update of the content of teaching placements.

Upon completing each stage of the formative experiment using diagnostic tools developed during the ascertaining experiment, the final tests were conducted and the empirical data on the quantitative distribution of students by levels of readiness for professional activities in inclusive education were obtained.

Results

The results obtained from a comparative analysis show that the quantitative distribution of the EG and CG students by their levels of readiness for professional activities under the conditions of inclusive education differ by each of its structural components and as a whole. The comparison of the data on the identification and the final tests proves the desired performance of the formative experiment (see Table 1).

Table 1. *The general dynamics of changes in students' readiness for professional activities under the conditions of inclusive education (in %) according to the summary data of identification and final tests (IT and FT)*

Levels of readiness	EG		Dynamics	CG		Dynamics
	IT	FT		IT	FT	
High	28.6	47.0	+ 18.4	29.5	32.0	+ 2.5
Average	35.4	39.8	+ 4.4	34.9	36.8	+ 1.9
Low	36.0	13.2	– 22.8	35.6	31.2	– 4.4

According to the summarized data of the final test, obtained in the process of identifying future physical education teachers' readiness for professional activities under the conditions of inclusive education, it becomes evident that the EG students have managed to increase it to a high

level. As evidenced by Table 1, the results of the identification test show that 28.6% of the EG students were at a high level at the beginning of the experiment, whereas 47.0% of them reached a high level after the formative experiment. The difference is equal to 18.4%. According to the identification test, the average level of readiness was characteristic of 35.4% of the EG students. The results of the final test prove that 39.8% of the EG students reached the average level (by 4.4% times more). Thus, the number of students with low readiness decreased from 36.0% to 13.2%, with a difference of 22.8%. In the CG, the levels of such readiness also increased slightly, but significantly less compared to the EG. As evidenced by the identification and final tests, the high level was characteristic of 29.5% and 32.0% of the CG students respectively, which is only by 2.5% times more. Besides, the identification and final tests show that 34.9% and 36.8% of the CG student are at an average level of such readiness, which is only 1.9% times more. Accordingly, the initial number of students with a low level was equal to 35.6% and it eventually decreased to 31.2%, which is by 4.4% times less.

To test these changes, the authors of the article used a statistical method for determining the φ criterion, which determined its empirical value as follows: $\varphi^*_{emp} = 9.53$. It is located in the area of significance. Therefore, there is a reason to argue that the functioning of an experimental model of the pedagogical system for training future physical education teachers for professional activities in inclusive education has been statistically proved to be sufficiently effective.

Discussion

The authors of the article agree with the findings of Kolupaieva (2009), who states that simultaneous learning of healthy children and children with special educational needs does not resolve all problems of their interaction since without proper pedagogical work the sphere of children's relations can remain deformed and defective. Therefore, the main mechanism for creating conditions for inclusive education in schools is the activities of the administration and the work of an interdisciplinary team, where the key role is played by the teacher, qualitatively fulfilling the expanded range of professional functions.

However, they do not agree with Babanskiy (1987) that the intensification of the educational process means some optimal organization of learning. This, in his opinion, allows one to achieve the best results as soon as possible at the expense of saving time. Thus, there is an increase in

the productivity of educational activities and the effectiveness of interaction between the university teacher and the student for a certain amount of time. However, it must be borne in mind that when improving the quality of education, one should not consider time savings as an absolute tool since the intensification aims to use a system of techniques to activate the reserve capacity of the individual and increase the efficiency of the educational and cognitive process. Therefore, it does not imply the revision of scientifically grounded standards of labour productivity but only a focus on the introduction of advanced pedagogical technologies.

The functional sufficiency of students' practical training depends to a large extent on the organization of the educational process at universities, during which, as evidenced by Kusherets (2003), the requirements for the content of learning, nature of problems and its praxeological tasks, synergistic effects are defined and implemented. Therefore, it should be emphasized that the information environment of higher education institutions should not only provide the maximum amount of knowledge to students but also teach them to use it based on their involvement. However, this is manifested only in the necessary and sufficient pedagogical conditions, specially created for creative activities to master the requirements for the chosen profession, professional skills and thanks to daily hard work, honest fulfilment of practical tasks. In this context, special attention is paid to principles of teaching praxeology, which should be adhered to in the training of future teachers: identifying the goals and results of learning activities; stimulating and enhancing students' positive attitude to learning, taking into account their needs and interests; cultivating the university teacher's competency in forming and developing students' motivational sphere; selecting effective methods, means and forms of activities; ensuring the interrelation between training stages; supporting the creation of individual conditions for self-regulation of cognitive activities.

The prospects of further research can be seen in analyzing, generalizing and adapting to modern conditions of inclusive education in foreign experience of learning, education and development of young pupils; preparing future specialists as subjects for creating an inclusive educational space in schools.

Conclusions

The pedagogical conditions for developing future physical education teachers' readiness for professional activities under the conditions of inclusive education are defined as follows: prioritizing the content of programmes and teaching methodologies of such courses as philosophy, the

history of pedagogy, the history of Ukrainian culture, didactic, theory and methods of education towards the values of inclusive education; improving the content, forms, methods and means required to master normative, psychological, pedagogical and correctional theoretical and practical and scientific foundations of inclusive education when studying such courses as developmental and pedagogical psychology, political science, pedagogical skills, fundamental of medical knowledge, fundamentals of defectology, fundamentals of correctional pedagogy, fundamentals of inclusive education, as well as didactic and correctional and developmental technologies during the classes dedicated to professional teaching methodologies; consolidating professional knowledge and practical skills of students when mastering such courses as inclusive physical education, psychology of creativity based on the simulation modelling and reflection on pedagogical experience of future physical education teachers under the conditions of inclusive education with the relevant update of the content of teaching placements.

The theoretical and practical training of future physical education teachers for professional activities is methodically provided on a comprehensive basis, taking into account the inclusive and correctional components of its content. To achieve the main goal and complete the objectives of theoretical and practical training of future physical education teachers for professional activities under the conditions of inclusive education, a set of teaching methods of those subjects was used, which take into account inclusive and correctional components of their content. It contains the methods of informational, visual, explanatory, analytical, synthetic, problem-seeking, interactive, cooperative, projective, modelling, imitative, situational, real-life, game-based, practical and creative learning, as well as integrative, differentiated, facilitating, informational, communicative, cognitive, activity-based, reflexive, evaluative educational technologies that varied according to the goals and objectives of each stage of the organization and the course of the educational process in higher education.

The results of the experiment prove the effectiveness of the developed model for the pedagogical system and the methodology of training future physical education teachers for professional activities under the conditions of inclusive education.

Given the relevance of the topic, it is recommended to improve the curriculum of training for future physical education teachers through the introduction of the courses on inclusive physical education and psychology of creativity with the involvement of materials from creative therapy, organizing and conducting practical training and updating the content of teaching placements accordingly.

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