

PREPARATION OF FUTURE TEACHERS FOR PROFESSIONAL ADAPTATION IN AN INCLUSIVE EDUCATIONAL ENVIRONMENT IN THE PROCESS OF STUDYING THE METHODOLOGY OF SCIENCE

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Abstract: Over the last decade, solving the issue of forming the readiness of future teachers for professional adaptation in an inclusive educational environment in the process of studying the methodology of science in educational institutions of Ukraine has become one of the most important social problems of the state society. The methodological approach of experimental research is based on the analysis of literary sources to compare and contrast the views of scientists on the investigated problem, systematization and generalization of theoretical data, comparative analysis; empirical: narrative methods (writing essays and mini-works), the method of expert evaluations, questionnaires, testing, conversations, observations, surveys, generalization of pedagogical experience, solving socio-pedagogical situations, idea generation technology, presentations, structural and logical schemes; diagnostic (questionnaire analysis); pedagogical experiment (declarative, formative, control). During an experimental study at the ascertainment stage among future teachers studying at the Oleksandr Dovzhenko Hlukhiv National Pedagogical University and the Pavlo Tychyna Uman State Pedagogical University, problems were identified, which consist in the insufficient readiness of future teachers to work in an inclusive educational environment in the process of studying methodology sciences and outlined ways to improve the methodology of their readiness for professional adaptation in an inclusive environment. A methodological toolkit was developed to increase researched readiness, namely: implementation of components of readiness and pedagogical conditions. The practical value of the work consists in training a specialist capable of implementing the creation of a favorable socio-pedagogical inclusive educational environment for the organization and implementation of the process of training inclusive education seekers in educational institutions of Ukraine.

Keywords: inclusion; index of inclusion; socio-pedagogical competence; readiness components; pedagogical conditions; inclusive educational environment; science methodology.

1 Introduction

The educational policies of many countries, including Ukraine, prioritize inclusive education as a key focus for advancing the higher education system and preparing future teachers to work effectively in inclusive educational environments. This emphasis aims to enhance the socialization and education of the younger generation.

The cognitive and emotional development of students in inclusive education settings, particularly during geography studies, relies heavily on teachers' professional competence. Specifically, it depends on their readiness for professional adaptation in inclusive educational environments, as well as their ability to individualize and differentiate instruction. Facilitating the cognitive and emotional growth of inclusive geography students' demands teachers to possess knowledge, creativity, and flexibility.

According to L. Barton, the problem of developing socio-pedagogical competence is currently relevant and requires thorough research. After all, the vast majority of teaching staff in higher education institutions of Ukraine faces significant difficulties when working with the inclusive students and cannot meet their educational needs [3].

Therefore, the study aims to define the concept of 'social-pedagogical competence' and address the issue of preparing future teachers for professional adaptation in inclusive environments during the study of science methodology in Ukrainian higher education institutions. This is achieved through the implementation of readiness components, namely:

motivational, cognitive, and reflective aspects; establishing pedagogical conditions for such training; increasing teachers' socio-pedagogical competence; and experimentally verifying the proposed method for training future teachers in inclusive educational environments during science methodology studies.

The ADA Anniversary Fellowship Program in Inclusive Education (ADA AFPIO) was conducted from December 1, 2016, to December 31, 2017, in collaboration with the University of Minnesota and Arizona State University. The project aimed to implement inclusive education methods in primary and secondary schools, as well as higher education institutions in Kazakhstan, Ukraine, Armenia, and India [7].

The project achieved several outcomes, including the establishment of networks between schools and higher education institutions with inclusive education systems in the participating countries. Additionally, units dedicated to inclusive education were established in higher education institutions to train specialists in various subjects. Educational and governmental institutions were engaged in relevant projects, and exchange programs for sharing experiences, internships, and project implementation were implemented in Ukraine, Kazakhstan, Armenia, and India. Professional seminars were organized, and reports were developed. Furthermore, communities of Inclusive Education were formed [14; 24].

The problem of forming the readiness of future teachers for professional adaptation in an inclusive educational environment in the process of studying the methodology of science in educational institutions of Ukraine is currently relevant and requires thorough research. After all, the vast majority of teaching staff in higher education institutions of Ukraine experience significant difficulties when working with the inclusive part of students and cannot meet their educational needs [4].

According to Akyar, Demirkhan, Oyeler, Flores, and Jauregi, the Ukrainian education system lacks a well-established framework for training future teachers to adapt professionally in inclusive educational environments during the study of science methodology. Consequently, integrating teachers into the inclusive educational process often leads to numerous contradictions and misunderstandings. These challenges stem not only from teachers' insufficient knowledge of inclusive teaching methods but also from their reluctance to engage with and contribute to the unfolding and development of students' potential abilities and opportunities [1].

In 2006, British scientists Mel Ainscoe and Tony Booth developed a tool for monitoring the 'Inclusion Index,' which has since been translated into 34 languages and implemented in 15 countries worldwide [2].

Canals-Botines M. and Raluy-Alonso A. believe that teachers in educational institutions in Ukraine lack sufficient qualifications to address the individual needs of inclusive students and are unfamiliar with methodologies for working with such students [6].

We support the opinion of M. Devare, who suggests specifying the components and criteria for future teachers' readiness for professional adaptation in inclusive educational environments: a positive attitude toward professional activity, inclusive competence, the ability for self-improvement, self-reflection, and self-management [8].

I. Marynchenko, O. Braslavskaya, O. Levin, Yu. Belikova, and T. Chumak argue that inclusive competence is crucial for shaping competitive specialists and consists of interconnected components: motivational, cognitive, operational, and reflective [16].

Based on the Concept of Development of Inclusive Education, the UN Convention on the Rights of the Child, the Salamanca Declaration, and the National Strategy in the Field of Human Rights, developing the readiness of future teachers for professional adaptation in an inclusive educational environment has become a priority in Ukraine's educational policy. Today's realities necessitate teachers who are specially trained to work in inclusive environments and who possess sustainable motivation to cater to this category of students. Therefore, the issue of forming the readiness of future teachers for professional adaptation in an inclusive educational environment is crucial for effectively working with students with special educational needs [7; 11].

In the context of Ukrainian society's development, inclusive education stands out as a priority in Ukraine's developmental agenda and plays a pivotal role in reforming its educational sector. The training of future teachers, particularly geography teachers, is an ongoing and dynamic process. It is imperative for future geography teachers not only to acquire knowledge of geography and pedagogy but also to develop the personal qualities necessary for successful teaching. Consequently, the issues surrounding the theory and methodology of training future teachers for professional adaptation in an inclusive educational environment during the study of science methodology remain relevant.

2 Methods

The primary methods employed in our experimental research aimed to investigate the problems of forming the readiness of future teachers for professional adaptation in inclusive educational environment during their study of methodology of science in Ukrainian higher education institutions. These methods included developing a methodology for establishing a conducive inclusive educational environment. This methodology consists of three readiness components: motivational, cognitive, and reflective, along with pedagogical conditions such as fostering a socio-cultural educational environment, shaping socio-cultural content, and establishing practical activity settings.

The methodology for preparing future teachers for professional adaptation in inclusive educational environments during the study of science methodology involved employing effective methods to create an inclusive educational environment in Ukrainian higher education institutions. These methods included using various types of lectures (problematic, multimedia, press conference lectures), innovative technologies (project-based learning, problem-based learning, contextual learning), engaging teachers in research activities (individual tasks, essays, abstracts), participation in conferences and seminars, and practical training in inclusive educational institutions. Additionally, methods such as expert evaluations, questionnaires, testing, conversations, observations, surveys, and the generalization of pedagogical experiences were utilized.

The experimental study was conducted with a carefully selected theoretical base to guide further research. Oleksandr Dovzhenko Hlukhiv National Pedagogical University and Pavlo Tychyna Uman State Pedagogical University were selected as the research sites. To ensure sample representativeness and reliability, the control and experimental groups were formed based on age and gender. The control-experimental array was formed using pairwise selection, ensuring that the experimental group's size met representativeness requirements. The sample comprised 80 future teachers from the two universities, with 38 respondents in the control group and 42 in the experimental group, including 34 women and 46 men.

At the initial stage of the research, a comprehensive review and analysis of scientific literature were conducted, including synthesis, classification, systematization, theoretical modeling, and generalization of methodologies for preparing future teachers for professional adaptation in inclusive educational environments while studying science methodology. The level of creating a conducive educational environment was assessed

based on motivational, cognitive, and reflective components, identifying key challenges that could be effectively addressed using the proposed methodology.

During the formative stage of the experiment, the effectiveness of pedagogical conditions in shaping future teachers' readiness for professional adaptation in inclusive educational environments was analyzed. This included the establishment of a sociocultural educational environment, the development of sociocultural content, and the creation of practical activity settings. Various methods, such as surveys, questionnaires, testing, as well as the assessment of empathic abilities using V. Boyko's method and the 'Benevolence Scale' and 'Value Orientations' methods by M. Rokich, were employed to obtain results. Finally, at the control stage of the experiment, the obtained results were analyzed, generalized, and conclusions were drawn.

3 Results and Discussion

The integration of scientific activity into higher education has become an essential component, merging science, learning, and production to drive development and innovation. However, the foundation of successful research lies in solid knowledge. Therefore, mastering the methodology, theory, technology, methods, and organization of scientific work is paramount for those striving for excellence in this field.

The educational discipline 'Methodology of Science' aims to elucidate all aspects of scientific research for students and graduate students. Its objectives include teaching them to: grasp the methodology and methods of scientific research (understand the principles and approaches underlying knowledge acquisition); justify the choice of research direction and topic (select relevant and promising topics with scientific and practical significance); and organize research activities (plan, conduct, analyze research, and formalize results according to scientific standards).

The discipline covers the means, methods, and techniques of scientific research, with knowledge acquired in the study of 'Methodology of Science' serving as invaluable assets for students, graduate students, and employees of scientific units.

Studying 'Methodology of Science' is an investment in the future, offering the opportunity to become a specialist of a higher caliber capable of generating new ideas, conducting research, and driving innovation, thereby advancing progress [21].

Today, inclusion holds significant importance in Ukraine's higher education system. Establishing a conducive inclusive educational environment within Ukraine's higher education system during the study of the 'Methodology of Science' is a novel approach to enhancing the educational landscape. By examining the experiences of foreign scholars in integrating inclusion into national education systems, it becomes apparent that there is a need to train teachers capable of adapting to the educational needs of inclusive youth [10].

The current stage of inclusive education development in Ukraine necessitates researchers to explore new means, content, forms, and methods for training future teachers to adapt professionally in inclusive educational environments.

In pedagogical practice, contradictions arise regarding the enhancement of future teacher training for inclusive educational environments during the study of science methodology. These contradictions exist between the state's imperative for implementing inclusive education in Ukraine and the scarcity of specialists in the field of 'Teacher of Inclusive Education.' There is also a discrepancy between social demands for future teachers capable of adapting in inclusive educational environments during the study of science methodology and the inadequate preparation of such teachers. Additionally, there is a contrast between the necessity to modernize the educational process from preschool institutions to higher education based on inclusive trends and the deficiency of socio-inclusive content in teacher training [12; 25].

With the support of the University of Minnesota and Arizona State University, the ADA Anniversary Fellowship Program in Inclusive Education (ADA AFPIO) was implemented from December 1, 2016, to December 31, 2017.

The goal and objectives of the project were to introduce inclusive education methods in primary and secondary schools, as well as institutions of higher education, in Kazakhstan, Ukraine, Armenia, and India [27]. The tasks included organizing a six-week professional internship for specialists in inclusive education in educational institutions of Minnesota and Arizona to enhance their experience and introduce the latest methods. Additionally, the project aimed to develop inclusive education projects in the participating countries and ensure the implementation of joint projects to introduce the latest teaching methods in inclusive education in Kazakhstan, Ukraine, India, and Armenia.

The project partners included the University of Minnesota (USA), Arizona State University (USA), Nazarbayev University (Kazakhstan), Bilim Central Asia Education Center (Kazakhstan), Armenian State Pedagogical University (Armenia), Vasyl Stefanyk National Precarpathian University (Ukraine), Odesa Development Fund (Ukraine), and Tata Institute of Social Sciences (India).

The concept of "inclusive education" refers to providing equal access to quality education for all learners using personalized teaching methods that take into account individual characteristics in educational and cognitive activities.

British scientists Tony Booth and Mel Ainscoe defined inclusive education as a strategy developed and implemented by participants in the educational process to overcome barriers to quality education. They developed a self-assessment mechanism called the 'inclusion index' based on three key aspects: inclusive culture, inclusive policy, and inclusive practice [4].

For the successful implementation of the educational model to train future teachers for professional adaptation in inclusive educational environments, educational, social, and physical inclusion must be harmonized.

Physical inclusion involves creating a barrier-free environment and adapting facilities to meet the educational needs of all students, such as ensuring easy access to buildings and arranging furniture accordingly.

Educational inclusion entails students mastering educational competencies established by educational standards using various methods such as differentiation and cooperative learning.

Social inclusion focuses on creating a favorable educational environment by fostering a friendly atmosphere, promoting principles and practices that encourage friendly relations, and providing care and support.

We interpret the concept of 'professional readiness' as a crucial component for graduates to quickly adapt to working conditions, further their professional improvement, and advance their professional development [15; 10].

We define the readiness of future teachers as the demonstration of an individualized approach to students, the ability to model classes with inclusive learners, and the utilization of instructional variability.

The process of training future teachers for professional adaptation in an inclusive educational environment is regarded as a complex and multifaceted component within the framework of comprehensive teacher education. This process is aligned with the overarching goal of educational institutions, aiming to ensure a high level of development of inclusive competence among future teachers for professional adaptation in higher education.

According to research conducted by Kilgour P, Reynaud D., Northcote M., and Shields M., future teachers' readiness for inclusive education encompasses information awareness,

knowledge of pedagogical technologies, and proficiency in psychology and corrective pedagogy [13].

Furthermore, Ozhybaeva Z.M. and Nurmukhanbetova N. N. suggest that the readiness of future teachers to work in inclusive educational environments, as developed through the study of science methodology, includes valuable personal attributes such as individual orientation, motivation, pedagogical optimism, tolerance, as well as didactic knowledge and methodological skills [18].

The methodology of science comprises a collection of principles and methods of scientific inquiry that define its overall strategy, structure, logical organization, and research tools and methods.

It covers a wide range of aspects:

- philosophical foundations of science: worldview prerequisites, principles, and categories on which the scientific picture of the world is based.
- general scientific methods: universal research methods used in various fields of science (observation, experiment, modeling, analysis, etc.).
- special methods: methods used in specific branches of science (e.g., chemical analysis, biological experiment, mathematical modeling).
- research techniques and techniques: specific tools and procedures used to collect, process, and analyze data.
- organization of scientific activity: principles and methods of planning, conducting, and evaluating scientific research.

The methodology of science serves several important functions: it guides scientific knowledge by determining the general direction of scientific development and assisting scientists in selecting relevant topics and research problems. It ensures the validity and reliability of scientific knowledge by helping researchers obtain accurate and objective results. Additionally, it contributes to the evolution of scientific methodology by constantly refining and expanding with new methods and approaches to research. Moreover, it fosters the integration of science with other fields of knowledge by establishing connections with philosophy, ethics, culture, and other domains of human activity. The methodology of science is a dynamic system that continually evolves with the emergence of new knowledge and research methods, incorporating new elements into its framework [13].

In today's context, the implementation of inclusive education in higher education institutions of Ukraine within the discipline 'Methodology of Science' takes on an expanded significance. Consequently, two distinct approaches have been identified: functional and personal.

According to both approaches, the theoretical aspect of future teachers' readiness for professional adaptation in an inclusive educational environment is inherently linked to the outcome of specialized teacher training, serving as a prerequisite for achieving success in their professional endeavors [22].

An analysis of scientific and pedagogical research on this issue [17; 23] provides grounds to assert that the comprehensive preparation of future teachers for professional adaptation in inclusive educational environments is a holistic process. This process involves specialized training in higher education institutions, continuous professional development during their career, resulting in the acquisition of socio-pedagogical and inclusive competencies, as well as the nurturing of creative development and professional qualities necessary for work in inclusive settings.

Wendelborg S. and Tøssebro J. argue that the foundation of professional readiness lies in effective professional training, which maximizes the potential of each individual.

In defining professional readiness, the author distinguishes five components: motivational, orientational-cognitive-evaluative,

emotional-volitional, operational-active, and institutional-behavioral.

In the structure of readiness for pedagogical activity, Marshall, Arcello, Montemayor, and Launer identify the following components: motivational, orientational, cognitive-operational, emotional-volitional, psychophysiological, and evaluative [15].

The diagnostic toolkit identified was adapted to identify indicators of the levels of formation of the structural components of future teachers' readiness for professional adaptation in an inclusive educational environment – cognitive, activity, and reflective.

The individual trajectory of forming a teacher's socio-pedagogical competence for professional adaptation in an inclusive educational environment is considered through:

- 1) introducing professional development courses for teachers;
- 2) completing an internship with a socio-pedagogical orientation and developing educational and methodological support for inclusive orientation courses. Utilizing innovative teaching technologies, such as essays and mini-works, during the internship. Employing methods like expert evaluations based on the results of pedagogical practices and inclusive observation within the inclusive environment;
- 3) conducting research work by future teachers;
- 4) undertaking practical training in inclusive educational institutions.

In order to implement the outlined components of future teachers' readiness for professional adaptation in an inclusive educational environment, specific pedagogical conditions have been identified, namely:

1. Creation of a socio-cultural educational environment within educational institutions.
2. Formation of sociocultural content.
3. Creation of a practical activity environment [5].

However, the implementation of inclusive education in higher education institutions of Ukraine necessitates their reorganization, which entails changes in culture, policies, and practical activities. This involves creating a conducive inclusive educational environment in these institutions and ensuring the availability of pedagogical personnel capable of working effectively within such an environment. In an inclusive educational environment, the role of a higher education institution teacher evolves; they must regard inclusive education seekers without distinction, engaging them in collaborative activities involving tasks of varying complexity and encouraging participation in collective learning formats such as group projects, laboratory research, and games [8; 23].

One of the most crucial methods of forming the readiness of future teachers for professional adaptation in an inclusive educational environment during the study of the methodology of science is the implementation of the readiness components outlined through theoretical research, namely: motivational, cognitive, and reflective aspects.

In the process of preparing teachers for professional adaptation in an inclusive educational environment, a distinct set of skills that they must possess can be identified:

Methodical skills involve proficiency in organizing and planning the educational process for inclusive education seekers. This includes utilizing innovative technologies, employing teaching methods conducive to health, conducting classes that are bioadequate, developing curricula tailored to inclusive education seekers, and utilizing art therapy methods [9, 19].

Prognostic skills encompass the ability to anticipate final outcomes, stimulate cognitive processes, and create corrective measures for the education, training, development, and social adaptation of inclusive education recipients.

Information skills entail interpreting educational material for use in an inclusive educational environment during the study of the methodology of science. This also includes utilizing modern educational information technologies to impart relevant competencies to students.

Motivational skills involve fostering positive motivation to work in an inclusive educational environment during the study of the methodology of science. This includes instilling a sense of success, confidence in a successful future, benevolence, sensitivity, balance, tolerance, and a desire to foster success in education.

Communicative skills revolve around the development of future teachers' pedagogical abilities to collaborate with inclusive education seekers.

Preventive skills: These involve preventing and resolving conflict situations that may arise in an inclusive environment.

Social rehabilitation skills: These skills encompass the ability to support inclusive education seekers during their socialization and adaptation to new conditions. This includes facilitating their interaction with the surrounding world and demonstrating empathy.

Rehabilitation and animation skills: This entails providing conditions that promote the restoration of cooperation in society and organizing quality leisure activities such as sea trips, hiking trips, etc.

Corrective and developmental skills: These skills involve organizing the cognitive development of inclusive education seekers and utilizing methods, techniques, and means of teaching, education, diagnosis, and correction of psychophysical development.

Assessment and correction skills: This involves the ability to assess the cognitive-activity component of inclusive education students and carry out appropriate correction measures [10; 26].

To implement the outlined components of future teachers' readiness for professional adaptation in an inclusive educational environment, specific pedagogical conditions are proposed:

1. Creation of a socio-cultural educational environment in institutions of higher education.
2. Formation of the socio-cultural content of the preparation of future teachers for professional adaptation in an inclusive educational environment.
3. Creation of a practical activity environment.

These determined components serve as the basis for developing the necessary methodological toolkit, which was used for diagnosing the inclusive competence of teachers. The sample comprised 80 future teachers from Oleksandr Dovzhenko Hlukhiv National Pedagogical University and Pavel Tychyna Uman State Pedagogical University, with 38 respondents in the control group and 42 in the experimental group, including 34 women and 46 men.

To assess the motivational component of future teachers' readiness for professional adaptation in an inclusive educational environment, their motivation to organize and conduct educational activities with inclusive education seekers was evaluated, along with the presence of positive emotional incentives for such activities. The "Personality diagnosis on motivation for success" method was employed for this purpose. Analysis of the survey results revealed that teachers' motivation levels varied, with 21% exhibiting a high level, 42% an average level, and 37% a low level.

The cognitive component of readiness was diagnosed by assessing the theoretical, methodological, and technological competences of teachers, enabling them to adapt to working in an inclusive educational environment during the study of methodology of science. The formation of the cognitive component level of readiness among future teachers for

professional adaptation in an inclusive educational environment was conducted using a questionnaire, A. Rean's questionnaire, and the "Social Intelligence" test by J. Gilford.

Based on the questionnaire results, it was determined that the level of preparation of future teachers for working in an inclusive educational environment while studying the methodology of science is relatively low. Specifically, out of 80 respondents, only 21.3% believe their level of training is high, 38.3% consider it to be average, 37.3% feel unprepared to work with inclusive education seekers, and 3.1% could not determine their level of preparation.

The reflexive component of future teachers' readiness for professional adaptation in an inclusive educational environment during the study of methodology of science was assessed through a questionnaire. According to the data obtained, 38.2% of teachers exhibited a low level of self-development orientation, lacking clearly defined goals for self-improvement and insufficient cognitive and professional motivation for success. In contrast, 27.9% of respondents demonstrated a strong desire for self-development, as evidenced by their interest in completing personal programs for professional growth, such as training courses. Additionally, 33.9% of respondents exhibited a low level of self-development orientation, indicating an interest in professional growth but lacking a corresponding action plan.

The results of diagnosing future teachers' readiness for professional adaptation in an inclusive educational environment, based on motivational, cognitive, and reflective components during the ascertainment stage of the research, are presented in Figure 1.

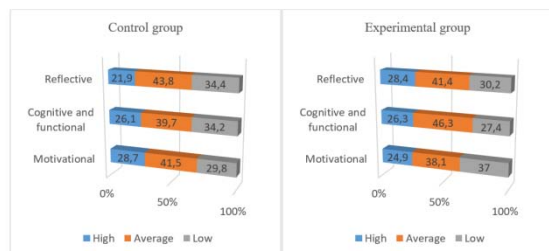


Figure 1. Results of diagnostics of the levels of readiness of future teachers for professional adaptation in an inclusive educational environment at the ascertainment stage of the experiment in the control and experimental groups

During the formative stage of the study, the theoretical and practical components of forming future teachers' readiness for professional adaptation in an inclusive educational environment were improved by establishing pedagogical conditions, each corresponding to a specific component of readiness.

As part of the study conducted with future teachers enrolled in the author's course "Theory and Methodology of Inclusive Education," the control group received classes using traditional methods, while the experimental group received instruction based on the proposed method.

The first pedagogical condition proposed for implementation is the creation of a sociocultural educational environment in higher education institutions, which aims to foster the motivational component of readiness. This condition focuses on instilling motivation in future teachers for professional activity within the inclusive environment of the educational institution. Developing and shaping the professional orientation of individuals is crucial in preparing teachers for professional adaptation in an inclusive educational setting. This orientation encompasses a positive attitude toward the profession, a drive for self-improvement, and the ability to tackle socio-pedagogical tasks across various levels within an inclusive environment.

To cultivate the motivational component of readiness, the coaching method was utilized as a form of creative partnership between teachers and students. This approach allows for the

realization of personal and professional potential. In the context of the study, the teacher of the "Theory and Methodology of Inclusive Education" course assumed the role of a coach, with students serving as coaching participants. Coaching, as a pedagogical technique, was employed to bolster the educational motivation of future teachers, promote active independent learning, broaden learning opportunities, foster self-assessment and reflection skills, and cultivate goal-setting, planning, and organizational abilities in their educational endeavors.

The implementation of pedagogical conditions significantly influences the development of socio-pedagogical competence and nurtures socially, personally, and professionally significant qualities in future teachers essential for their adaptation in an inclusive educational environment. This fosters the creation of comfortable conditions within an inclusive team and enables teachers to adapt to the educational environment while considering the individual needs and characteristics of learners.

In order to check the level of formation of the motivational component of readiness based on the results of the coaching, respondents were offered the questionnaire «Labor Motivation Profile» (TMP); questionnaire «Identifying the ability for professional self-development».

The second pedagogical condition, focusing on the formation of sociocultural content, aims to establish a comprehensive pedagogical process. It emphasizes the creation of socio-inclusive content to prepare future teachers for adaptation in an inclusive educational environment during the study of the methodology of science. This condition emphasizes the integration of theoretical knowledge and practical skills to develop the cognitive and activity components of readiness.

Various methods will be employed to implement the second pedagogical condition, including analyzing educational documentation, narrative techniques (such as essays and mini works), expert evaluations, observational methods, round table discussions, situational learning, idea generation technology, presentations, logical schemes, analysis of socio-pedagogical situations, author questionnaires, conversations, explanations, and problem-solving activities. These methods will equip future teachers with the necessary skills to work effectively with inclusive education seekers [11; 19].

The third pedagogical condition aimed to create a practical activity environment. To implement this, advanced training courses were introduced to facilitate the development of socio-pedagogical competence.

The implementation of these pedagogical conditions involved internship opportunities in the field of inclusive education, participation in problem-solving groups, and the utilization of various assessment methods such as V. Boyko's empathic abilities assessment, the "Benevolence Scale" method (based on the Campbell scale), and the "Value Orientations" method (by M. Rokych). Additionally, future teachers engaged in activities including the development of lecture classes (utilizing various formats such as problematic, multimedia, and press-conference lectures), the adoption of innovative teaching methodologies (such as project-based and contextual learning), participation in research activities (including individual tasks, essays, and abstracts), attendance at conferences and seminars, involvement in circles and problem-solving groups, completion of practical training in inclusive educational institutions, and the creation of educational and methodological resources.

As a result of implementing these pedagogical conditions, respondents gained knowledge of innovative technologies in inclusive education, acquired understanding of the age and psychological aspects of personality development, and developed proficiency in various forms, methods, and techniques for enhancing cognitive, emotional, and conative aspects of students' personalities within inclusive setting [13].

Consequently, the results of diagnosing the readiness of future teachers for professional adaptation in an inclusive educational

environment, based on three pedagogical conditions at the formative stage of the study, are illustrated in Figure 2.

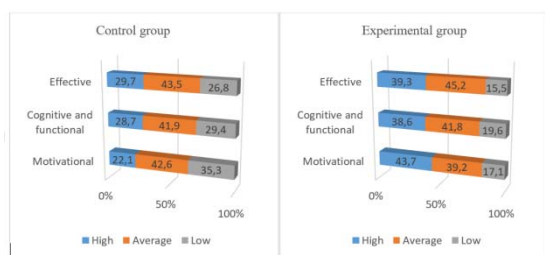


Figure 2. Results of diagnostics of the levels of readiness of future teachers for professional adaptation in an inclusive educational environment at the formative stage of the experiment in the control and experimental groups

Based on the obtained results, it can be affirmed that the proposed method is effective, as the respondents in the experimental group demonstrated an improvement in the level of readiness components and the implementation of pedagogical conditions in the educational process. These identified pedagogical conditions are fundamental for designing a pedagogical system to train teachers for professional adaptation in an inclusive educational environment, as they enable a broader influence on the teacher's personality.

Therefore, ensuring the readiness of future teachers for professional adaptation in an inclusive educational environment in higher education institutions of Ukraine stands as a vital principle in humanizing the entire higher education system. It represents a priority direction of state policy aimed at providing the necessary conditions for obtaining quality education. Achieving a high level of socio-pedagogical competence formation will enable teachers to effectively facilitate the educational process for all participants involved.

4 Conclusion

In the course of the study, various concepts such as "inclusion," "social-pedagogical competence," "inclusion index," "the process of preparing future teachers for professional adaptation in an inclusive educational environment," "readiness of future teachers for professional adaptation in an inclusive educational environment," "components of future teachers' readiness for professional adaptation in an inclusive educational environment," and "pedagogical conditions" were explored. Potential avenues for enhancing the process of forming the readiness of future teachers for professional adaptation in an inclusive educational environment during the study of methodology of science in Ukrainian educational institutions were identified.

The study aimed to examine the methodology and outlined components for forming the readiness of future teachers for professional adaptation in an inclusive educational environment, focusing on motivational, cognitive, and reflective aspects.

During the initial stage of the research, it was found that a significant number of respondents lacked sufficient adaptability in the inclusive educational environment of higher education institutions. This trend underscores the importance of establishing the necessary pedagogical conditions, including creating a socio-cultural educational environment, shaping socio-cultural content, and establishing a practical activity environment.

However, the aggregated data from the formative stage of the experiment, following the implementation of the proposed method, suggest the effectiveness of the employed methodological materials.

A promising area for further research involves exploring contemporary international programs designed for future

teachers to enhance their understanding of educating students with special needs. The findings of scientific research and the derived conclusions could serve as a valuable scientific foundation for enhancing teacher training to work with inclusive youth, drawing from the experiences of foreign countries.

In this regard, Ukrainian educational institutions should focus on updating teacher training methods, beginning with technical schools, colleges, schools, and higher education institutions. This may include establishing a virtual educational space, developing methodological materials for working with inclusive education seekers, creating simulators for laboratory work, and enhancing existing methodological materials for various disciplines.

Furthermore, opportunities for further exploration and research could arise through the participation of Ukrainian teachers in international professional development programs and their exposure to the experiences of foreign colleagues in working with inclusive education seekers.

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Primary Paper Section: A

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