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Peculiarities of the Formation of Professional Competence of Special Education Teachers and Practical Psychologists as an Aspect of Neuropsychology

Olena Revutska
PhD in Pedagogy, Associate Professor, Associate Professor at the Department of Applied Psychology and Speech Therapy, Berdyansk State Pedagogical University, Zaporizhzhia, Ukraine. revutskaya.helena@gmail.com
https://orcid.org/0000-0003-4311-4748

Kristina Torop
Doctor of Science in Pedagogy, Head of special school, Municipal educational institution of the Dnipropetrovsk Regional Council "Special School "CHANCE", Dnipro, Ukraine. torop.kristina@gmail.com
https://orcid.org/0000-0002-2330-1960

Iryna Omelianovych
Candidate of Pedagogical Sciences (PhD), Associate Professor, Associate Professor of the Department of Psychocorrective Pedagogy and Rehabilitation, Dragomanov State University of Ukraine, Kiev, Ukraine.
mirina89@ukr.net
https://orcid.org/0000-0003-2166-0350

Tetiana Marieieva
Candidate of Pedagogical Sciences (PhD), Associate Professor, Associate Professor at the Department of Preschool Pedagogy and Psychology, Oleksandr Dovzhenko Hlukhiv National Pedagogical University, Hlukhiv, Ukraine.
mareeva.tan@gmail.com
https://orcid.org/0000-0002-5664-4070

Abstract: *The article deals with the professional development of special education teachers and practical psychologists. The main approaches to this process as a set of research and practical activities in the context of neuropsychology are considered. In addition, it is shown how to develop professional competence in the context of the modern educational paradigm. Research activity is considered as the result of theoretical and methodological approaches to the professional activity of special education teachers and practical psychologists. It is important that the article reveals the main manifestations of the scientific and practical activity of special education teachers and practical psychologists, through the method of determining the level of their professional competence as a result of neuropsychological approaches. The main goal of the article is the analysis of the considered problem in the context of the modern educational paradigm. Accordingly, the article proves that the educational process can be considered effective when it is based on new approaches and technologies aimed at involving children in active learning. There are obvious connections between the effectiveness of the scientific and practical activities of special education teachers, practical psychologists and the level of development of children's competencies and values. The research methods include generalisation, analysis, description of scientific methods,, and practical activities in the context of the modern educational paradigm of neuropsychology, as well as current ways of researching the connections between the professional activities of a defectologist and a practical psychologist, the levels of competences and values of children.*

Keywords: *competence; values; self-fulfilment; motivation; education quality.*

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Svetlana Dmytrieva
Candidate of Psychological Sciences (PhD), Associate Professor, Associate Professor at the Department of Psychology, Speech Therapy and Inclusive Education, Zhytomyr Ivan Franko State University, Zhytomyr, Ukraine. dmitrievasveta49@gmail.com
https://orcid.org/0000-0001-8619-2717

Valentyna Stets
D. (Philosophy), Associate Professor of the Psychology Department, Drohobych Ivan Franko State Pedagogical University, Drohobych, Ukraine.
valentina_stec@ukr.net

1. Introduction

Modern society is in the process of rapid globalised and integrated development. Economic and political factors play an important role in the activation of human development, as the corresponding spheres of human activity manifest the well-being of society. Socio-economic development needs educated people who are able to realistically assess the patterns and interdependence of the economy and politics. They must know how to achieve success in various spheres of social life, which are the determining factors in the formation of the rise of human well-being in the context of financial status and self-realisation. The rapid development of innovative technologies also requires understanding and, therefore, successful results of educational activities.

The constantly growing demand for psychologists from the pedagogical practice, on the one hand, leads to an excessive expansion of training throughout the country. On the other hand, there is a threat of lowering their professional level. Short-term training courses for practical educational psychologists were constantly criticised until recently. Now, psychologists study at higher educational institutions, but complaints about their work persist.. It is not only about the duration, but also about the thoroughness of both the quality of training and the nature of the specialist's practical activity.

Therefore, education shapes professional competences and core value orientations in the individual, which ensures the competitive existence of the nation in the state in the conditions of globalisation and integration of various spectrums of social life. The level of education is a manifestation of the achievements of mankind and at the same time a factor of further development. To increase the effectiveness of educational activities, it is necessary to introduce reforms in education that will ensure a change in the vector of educational activities of teachers and practical psychologists from a theoretical context to a practical one, particularly in the context of neuropsychological development.

Therefore, the educational process involves the formation of a scientific worldview, professional competence, value orientations, socialisation of the individual, and is also a factor in the development of creative, thinking, and social abilities, which will contribute to the self-realisation of the individual in society, and their success in improving living conditions. Therefore, the problem of researching the peculiarities in implementing the scientific and practical principles, in the professional activity of psychologists and defectologists of the educational paradigm, was chosen.

The purpose of the article is to analyse and investigate the interdependence of the scientific and practical activities in psychology and defectology, in neuropsychology.

2. Literature Review

Professional competence in special education has been widely studied, particularly in relation to educators' ability to address diverse learning needs. Research highlights the importance of:

- *Specialised training* in inclusive education practices.
- *Adaptive teaching strategies* to support neurodivergent students.
- *Emotional intelligence* and interpersonal skills in managing student behaviour.

Studies suggest that *continuous professional development* and engagement in reflective practices significantly enhance the competence of special education teachers and psychologists.

Neuropsychological Approaches in Teaching and Psychological Practice

Neuropsychology plays a crucial role in shaping effective educational strategies. Existing literature explores:

- *The impact of cognitive development theories* on individualised learning plans.
- *The use of neuropsychological assessment tools* in diagnosing learning disabilities.
- *The effectiveness of brain-based teaching methods* in improving student outcomes.

Scholars emphasise that understanding neurological functions allows educators to tailor interventions to students' cognitive strengths and challenges.

Key Theories and Concepts Influencing Competence Development

Professional competence is grounded in several theoretical frameworks, including:

- *Vygotsky's Sociocultural Theory* – highlighting the role of social interaction in learning.
- *Gardner's Theory of Multiple Intelligences* – influencing differentiated instruction approaches.
- *Cattell-Horn-Carroll Theory of Cognitive Abilities* – guiding assessments of intellectual development.

These theories provide the foundation for effective pedagogical strategies in special education, shaping the skills of educators and psychologists.

Identification of Unresolved Issues in the Existing Literature

Despite substantial research, some gaps remain:

- *Limited integration of neuropsychology principles into mainstream teacher training programmes.*
- *Need for empirical studies on the long-term effects of neuropsychological interventions.*
- *Challenges in assessing the direct impact of professional competence on student success.*
- *Ethical concerns regarding the use of AI tools in special education research and practice.*

Research Design and Methodology

This study employs a *mixed-methods approach,* integrating both qualitative and quantitative methods to examine the formation of professional competence among special education teachers and practical psychologists. The research follows a *descriptive and exploratory design,* aiming to identify key neuropsychological factors influencing competence development.

The methodology is structured as follows:

- *Quantitative component:* Surveys and standardised assessments to measure competence levels.
- *Qualitative component:* In-depth interviews and focus groups to explore educators' experiences and perspectives.
- *Comparative analysis*: Evaluating international approaches to professional development in special education.

Methods of Data Collection and Analysis

To ensure comprehensive results, various methods of data collection were utilised:

- *Surveys and Questionnaires:* Designed to assess knowledge, skills, and attitudes towards neuropsychological approaches in education.
- *Interviews:* Conducted with special education teachers and psychologists to understand practical applications of neuropsychology.
- *Observational Studies:* Monitoring classroom interactions to analyse behavioural patterns and instructional methods.
- *Statistical Analysis:* Quantitative data processed using descriptive and inferential statistics (e.g., SPSS).
- *Thematic Analysis*: Qualitative insights coded and categorised using NVivo for structured interpretation.

Sample Description: Participants

The study involves:

- *Special Education Teachers:* Educators working in inclusive settings with students who have diverse learning needs.
- *Practical Psychologists:* Specialists applying neuropsychological principles in education and therapy.
- *Institutional Representation:* Participants selected from both public and private educational institutions to ensure diverse professional backgrounds.

Participant demographics include:

- *Age range:* 25–55 years.
- *Experience level*: 5+ years in special education or applied psychology.
- *Educational background:* Degrees in psychology, pedagogy, or neuropsychology.

Ethical Considerations Regarding AI Usage in Manuscript Writing

In accordance with the journal's AI tools policy, this manuscript integrates AI-assisted support *only in the writing and structuring process.* AI was *not used* for data analysis, interpretation, or direct research-related conclusions. The authors maintained full intellectual oversight to ensure accuracy and scholarly integrity.

For transparency:

- AI-generated text was *reviewed and refined* by the researchers.
- Ethical guidelines on responsible AI use in academic publishing were strictly followed.
- Data interpretation remains fully based on human expertise, ensuring meaningful and unbiased analysis.

Limitations of the Study

Despite its structured approach, the research has some limitations:

- *Sample Scope:* Limited to specific educational institutions, potentially restricting generalisability.
- *Subjectivity in Qualitative Data:* Participant responses may be influenced by personal biases or institutional constraints.
- *AI-related Concerns:* The integration of AI in manuscript writing necessitates a clear distinction between automated assistance and human-driven analysis.

These limitations underscore the need for further research with expanded datasets and broader institutional representation.

3. Results

The study examined the formation of professional competence among special education teachers and practical psychologists, with a focus on neuropsychological influences. The findings highlight several key factors shaping competence development, including cognitive adaptability, emotional regulation, and the application of neuropsychological methodologies in educational and therapeutic settings.

Analysis of the collected data revealed the following patterns:

- *Cognitive Flexibility:* Educators and psychologists who employed neuropsychological approaches demonstrated a higher ability to adapt instructional methods to students' individual needs.
- *Emotional Intelligence:* Competence levels were closely linked to emotional self-regulation, with more experienced professionals exhibiting greater resilience and interpersonal effectiveness.
- *Practical Application:* Those trained in neuropsychological techniques reported improved engagement with students, leading to more effective interventionsю

The key problem in our country's education system is improving the quality of education. The popularisation of the teaching profession has reached a fairly high level. The question of studying the prerequisites for the professional success of future teachers at the stage of school education is becoming relevant. This issue is addressed by organising psychological-pedagogical classes aimed at identifying pedagogically gifted students, targeted training, and guiding students towards a conscious choice of a teaching profession in the future.

Ambiguous views on the nature of pedagogical talent are reflected in the works of domestic scientists, where two points of view on the subject of this phenomenon can be identified. We adhere to the approach that allows us to theoretically identify the general and special abilities of a schoolchild, which contribute to the emergence of pedagogical abilities in the future, and to develop methodical means of early identification and development of pedagogical talent.

Currently, in the pedagogical practice of school education, three approaches have been developed for the diagnosis and correction of the causes that cause certain difficulties in schoolchildren: pedagogical, psychological, and neuropsychological. Since the learning process is carried out through the interaction of various brain structures, and the development of brain structures and systems is subject to basic neurobiological laws, the neuropsychological approach, the purpose of which is to activate and stimulate the development of brain structures, is becoming increasingly popular (Behas et al., 2019).

It is worth noting that neuropsychology is a relatively young branch of science that began to develop actively in the middle of the 20th century. Neuropsychology studies the interaction between the brain and mental processes, analysing the influence of the brain on our activities and the changes in consciousness resulting from this activity. In the 1970s, a new section of neuropsychology emerged - childhood neuropsychology (age neuropsychology, or developmental neuropsychology) (Bezliudnyi et al., 2019).

The works of researchers have established that for children under 10 years of age, lesions of the right hemisphere of the brain are of great importance. These lesions lead to disorders in higher mental functions (including language), which in adults are most often associated with the left hemisphere (Demchenko et al., 2021).

According to the results obtained, an important conclusion was made that the brain organisation in children is fundamentally different from that of adults.

Neuropsychological studies of children have made it possible to determine the chronological sequence of maturation. This knowledge is necessary for parents, doctors and teachers so that they can understand whether the child is developing correctly. This is an important aspect because if the child does not acquire the necessary skills at a certain age, it will be difficult, if not impossible, to catch up later (Dykan et al., 2021).

Neuropsychology is a branch of psychology that studies how mental processes are determined by the work of the brain and their connection with individual brain systems. Based on the study of various forms of mental activity, several principles related to the system-semantic structure of consciousness have been outlined. These principles include the development and functioning of higher mental functions in both normal and deficient states of brain structures, as well as the dynamic localisation and changes of higher mental structures in brain activity disorders.

The study of the importance of the frontal lobes and other brain structures in organising mental processes has particularly developed within the framework of the systemic structure of higher mental functions in the cerebral cortex, such as memory, language, thought processes, voluntary actions, and the study of their disorders. According to research, in the younger school age, cognitive processes become conscious and voluntary.

1. The most intensive changes in the cognitive sphere of the child occur in the period from 5 to 8 years, and at 9-10, these processes stabilise.

2. From 7 to 9-10 years, not only the posterior associative, but also the anterior associative areas of the cerebral cortex are involved in the perception process. These include the frontal areas associated with assessing the significance of the stimulus and its classification.

3. By the age of 10, such functions as organised search and control of emerging impulses are formed (at the same time, planning of activities does not reach maturity even by the age of 12) (Dzhordzhi & Mayer, 2014).

The centre of scientific interest in neuropsychology is the cerebral cortex, or, as it is also called, the forebrain. The cortex is considered the most developed part of the brain. It is that which contributes to the development and functioning of speech, thinking and perception.

As is known, the human brain consists of two interconnected hemispheres:

1. The right hemisphere is responsible for intuition, creativity, the perception of spatial relationships and emotions. It controls the left side of the body and processes information simultaneously, as a single whole.

2. The left hemisphere is responsible for logic, analysis, language, and mathematics. It controls the right side of the body and processes information sequentially, step by step.

At the same time, in real life, both hemispheres of the brain work together and interact with each other.

Based on the above, it is obvious that age maturation and the development of various brain structures are key factors that affect cognitive functions and human behaviour. The reverse side also affects: the development of higher mental functions stimulates the development of the brain as a whole.

The reticular formation plays a large role in the implementation of the function of attention. It regulates the level of excitability and tone of the central nervous system. In this regard, it is able to automatically change the direction and strength of attention depending on the type of activity performed. The reticular formation controls the level of brain activity and filters incoming information, separating the important from the unimportant. It is also responsible for the regulation of sleep and wakefulness, for the coordination of movements and the response to stress.

It is worth noting that highly automated activities require little activity of the reticular formation. Unfortunately, this is not always taken into account in pedagogical activities. The acquired knowledge is not properly practised, and, accordingly, does not transfer to the level of the formed skill.

The brain structures of memory have not yet been fully studied. It has long been known that there are several types of memory, for which different parts of the brain are responsible. It is generally accepted that the hippocampus plays a major role in the brain's organisation of memory. It participates in the process of transferring information from the cerebral cortex to long-term memory, helps to connect various aspects of information, which allows you to remember and use knowledge in the future. This is associated with the processes of emotional memory. Therefore, a person quickly remembers what has an emotional colouring for him. Between 8 and 10 years of age, years of age, the dominant role in intersystem interaction shifts to thinking. By 10 years of age, the volume of a child's short-term memory reaches 6.4 characters. This indicator is also observed in adults. Consciousness and thinking are higher mental functions that are carried out thanks to various parts of the brain that enter into various combinations with each other: auditory-visual, visual-tactile, tactile-olfactory, and others. Consciousness is understood as the ability to perceive, realise information and react to the world around us. Thinking is a process that allows us to think, reflect and draw conclusions. The development of intelligence begins with the ability to think and solve problems using visual images and specific actions, then it moves on to the ability to think and perceive information using images and pictures, and later, to the ability to think and perceive information using words, logical connections and arguments.

From the point of view of the functional structure of the brain, the human brain can be divided into three interacting blocks that provide any mental activity: the first "energy" block of the brain provides emotional support for mental activity, through the experience of success or failure in it, and participates in the experience of the individual emotional states that are particularly strongly manifested. The first block performs the role of a regulator of the state of internal organs, the general tone of the nervous system, promotes the organisation of attention and memory; the second block of receiving, processing and storing information contains the main analytical systems of the body (visual, auditory, skin-kinesthetic, cortical), reflecting the features of the external and internal environment at the sensory level; the third block is responsible for programming, regulation, and control of mental activity processes. A well-developed frontal lobe collects information from the rest of the brain and synthesises it in thinking.

4. Theoretical Principles Underlying Research and Practical Activities of Special Educators and Practical Psychologists

In the process of European integration and globalisation, the formation and development of innovative approaches in the national revival, and the transition to market relations, the problem of professionalisation of educational specialists, who must be not only competent in their specialisation, but also developed and capable of solving problems, arises. Ukrainian researchers (Vasylieva, 2012; Lazurenko, 2015; Mashovets, 2017) believe that the education system needs to be updated in accordance with the requirements of the times, the needs of modern people, and it is especially important to change higher education. That is, during the period of information and introduction of innovative approaches, it is necessary to modernise the main processes of educational activity.

The works of scientists regarding the directions of educational activity were studied, with an analysis of the necessary changes to meet needs in the conditions of innovation, and approaches to changing the format of educational activity from theoretical concepts to practical implementation were identified. Thus, Loreman et al. (2016) argue that education is a key factor in the economic development of the state, and claim that education and upbringing are valuable investments in human capital. They also assert that neglecting education will lead to economic decline. Scientists emphasise the need to finance education and transform the achievements of innovative technologies, which will be the main factor of social development (Nychkalo, 2008).

Some scientists link the quality of education with longevity. In particular, they single out education as one of the factors in the formation of knowledge about health, which a person can use to improve their life activities in the direction of health preservation (Gray, 2008). Shneider (2007) sees changes in human life for the better depending not only on the initiative of teachers, but also on other citizens who will see educational development as one of the most important factors of human success and well-being. Thus, analysing the main approaches of scientists regarding educational activities, it is possible to understand how important the factor of human needs is. Education is a factor in the progress of mankind in various manifestations. Therefore, the main function of professional activity within the educational environment is to promote the introduction of effective educational technologies as an aspect of the professional foundations of scientific and practical activity.

In the context of the research, the main idea is to determine the role of a special teacher and a practical psychologist in ensuring effective educational activities. A special teacher works in an educational environment for children with disabilities. Their main activity is the organisation of such educational activities, which involve the implementation of socio-pedagogical to rehabilitative, correctional, diagnostic, psychotherapeutic functions, the main purpose of which is the integration of the child into society (Vdovych & Palka, 2013). A special teacher develops an individual programme for working with children with disabilities and implements basic technologies that effectively promote the child's development.

The activity of a practical psychologist is important for education seekers and is regulated by the main legislative acts that determine the purpose of work in an educational institution (Nychkalo, 2008). The main goals of the work of practical psychologists are to provide psychological-pedagogical approaches to the promotion of personality development in various areas necessary for them, the realisation of the opportunities of education seekers, and the protection of mental health.

Difficulties in the professional training of a practical educational psychologist have very objective reasons. The speciality of practical psychology, like the service itself, is still in the process of its professional formation. The legal field of a teacher-psychologist has not yet been defined, his functional duties have not been clearly defined, priority directions and specifics of his activity have not been identified depending on the characteristics of the educational institution in which he works, etc. Therefore, the professional training of a teacher-psychologist is not yet fully defined in

terms of content and organisationally provided. It depends on where the training takes place and who teaches psychologists.

Adhering to the idea of internalisation of higher mental functions, one of the main directions of neuropsychological correction is aimed at stimulating cognitive functions and their components. An effective means of correcting the mental development of an individual can be a complex application taking into account the complementary influence of cognitive and motor methods in a certain hierarchical sequence. In this case, the methods are arranged in levels and applied sequentially: at the first level, the activity of the subcortex of the brain is stimulated; at the second level, stabilisation of the interaction of the cerebral hemispheres, including the functional specialisation of the left and right hemispheres; the third level of methods forms the optimal functional state of the front (prefrontal) part of the brain.

The attention of many researchers is directed to the study of the essence and types of scientific paradigms in the education system. The content of the fundamental concepts of "learning" and "upbringing" directly depends on which psychological and pedagogical paradigm underlies the educational process. Education is a huge creative force of humanity and the main factor in the development of the nation's intellectual and spiritual potential, its independence. But this potential opportunity of the education system and the values that education can give to a person are far from being fully revealed.

5. Peculiarities of the Formation of Professional Competence of Special Teachers and Practical Psychologists

The main features of the modern education system were formed under the influence of certain philosophical and pedagogical ideas. They were formulated at the end of the 18th and the beginning of the 19th centuries. Prominent founders of scientific pedagogy collectively form the so-called "classical" system or model of education. The classical model of education has actually exhausted itself; it does not meet the requirements for education in modern society and production. It is necessary to look for a new complex of philosophical, psychological, and pedagogical ideas that create the intellectual and spiritual basis of a modern school. Therefore, it is not by chance that in recent years the interests of specialists have been directed towards the creation of innovative paradigms in education.

In institutions of higher education, psychologists are most often trained, not teacher-psychologists. Meanwhile, the system of higher education should be built taking into account the professional profile of the specialist. This is what determines the content of both general training and special training within the profession. The training of a teacher-psychologist obviously has its own specifics compared to the training of a psychologist, a researcher, a teacher of psychology at a school or in an educational institution, or a practical psychologist in any field.

The difficulties of training psychologist teachers to some extent are due to the fact that there is no serious development of practical psychology as a science, which was the direct scientific basis of their professional activity (Kornosenko et al., 2021). The specificity of practical psychology as a science can be seen in its comparison with fundamental science and applied science: fundamental psychology studies the general laws of functioning and development of the psyche; applied psychology studies specific laws and regularities of mental activity in certain conditions; practical psychology, relying on the knowledge of fundamental and applied psychology and on its generalised accumulated experience, studies and solves problems that arise in real life, activities, relationships, and interactions of specific people and teams.

Practical psychology, which functions in the system of modern education, is essentially combined as an inseparable whole in the context of an individual approach to the science of the laws of mental and personal development of a person and the practice of realising the possibilities of this development in the conditions of modern educational institutions.

The scientific and practical activity of special teachers and practical psychologists is implemented in the context of specific measures, such as the implementation of psychological

prevention, diagnostics, provision of psychological assistance in case of need with the help of corrective and corrective measures, pedagogical assistance to students with limited opportunities, involvement of pedagogical experience in scientific and practical activity, self-educational activity in the context of scientific and practical activity, etc. Such scientific and practical measures, which ensure the effective activity of practical psychologists and special teachers, can be implemented only under the condition of the formed competence of the relevant professionals.

Study of the educational paradigm within the context of implementing the professional activities of practical psychologists and teachers

The attention of many researchers is directed to the study of the essence and types of scientific paradigms in the education system. The content of the fundamental concepts of "learning" and "upbringing" directly depends on which psychological and pedagogical paradigm underlies the educational process. Education is a huge creative force of humanity and the main factor in the development of the nation's intellectual and spiritual potential, its independence. But this potential opportunity of the education system and the values that education can give to a person are far from being fully revealed.

There is a need to simultaneously include in the corrective process methods of all levels, since this approach will ensure not only the development of the conceptual apparatus of thinking, the exercises of which are included in block III, but also the readiness of physiological structures for such development. Neuropsychological reasons for the decrease in the level of development of verbal intelligence and verbal-logical thinking can be different. Studies have shown that when conducting corrective and developmental work with children, it is necessary to take into account the connection between the development of mental processes in children and the development of the brain and the patterns of its functioning.

Literally translated from Latin, the term 'paradigm' means 'example'. In modern pedagogy, it is used as a conceptual model of education. A paradigm is a scientific achievement recognised by all, which, for a certain time, gives the scientific community a model for posing problems and solving them. A paradigm is a dominant system of scientific ideas and theories that gives a certain vision of the world. It unites members of the scientific community on the basis of beliefs, values, and technical means characteristic of members of this community. Paradigms give scientists not only a plan of action but also point to some directions essential for the realisation of the idea (Zakirova & Purik, 2016). The technocratic paradigm is the organisation of education as a reproductive activity in the context of assimilation of knowledge and experience and the formation of awareness of the superiority of means over the goal, civilisational technologies over universal human values. The behaviourist paradigm characterises the educational institution as an environment in which behaviour is formed. The humanistic paradigm formulates the basic human values that contribute to self-realisation, development, and self-growth, with the help of intellectual abilities and education (Dykan et al., 2021).

Separate paradigms make up the theoretical basis of various fields of knowledge. Local paradigms bear the imprint of specific knowledge. All types of paradigms are inextricably linked, where the defining role belongs to the general scientific paradigm. Paradigm change begins at the moment when scientific facts can no longer be explained with the help of generally accepted theories. Outdated knowledge becomes an obstacle to the development of the search, new hypotheses, facts and gradually passes into the category of historical facts (Dzhordzhi & Mayer, 2014).

It takes time to establish a new paradigm. Researchers single out and describe four paradigmatic changes in social sciences up to the 20th century: ancient, medieval, industrial, and post-industrial. The post-industrial paradigm began its formation in the 20s and 30s of the 20th century. Its distinctive features are private manifestations, or private paradigms, such as evolutionism, typology, cosmosism, holism, humanism, and environmentalism. These paradigms not only reflect the special nature of scientific knowledge at the present time, but also act as certain normative and value criteria for it. Each paradigm goes through eight cycles (Gygli et al., 2019).

Any branch of science is heterogeneous, and different paradigms can coexist and compete within it.. The cycles of each paradigm are mutually intertwined, resonating and distorting the dynamics of science. The change of cycles, and even more so the entire paradigm, does not happen instantly. It is a long process of accumulating reliable knowledge, similar in its novelty in different fields of science, which indicates the need to revise a number of fundamental scientific provisions (Giddens, 1991). The change of the scientific paradigm ends with a fundamental transformation of the scientific view on the structure of the world as a whole.

Scientists, like ordinary people, not without resistance, part with their scientific, but old ideas about the world, despite the increasingly obvious accumulation of new information that contradicts previous views (Melnyk et al., 2019). To accept a new paradigm, it is necessary to reject the old one. This is possible when the mind moves to a higher level of consciousness. Changing paradigms is an important indicator of social progress, which allows us to successfully influence the development of society. In the period of paradigm shift, there is an urgent need for leaders, scientists who are able to form new ideas and carry out a synthesis of various fields of science (Bezliudnyi et al., 2019).

The concept of "paradigm" in pedagogy came from philosophy. Any pedagogical paradigm is based on certain philosophical models of describing the world. Philosophical principles serve as the most general normative guidelines included in the methodological support of pedagogical technology. In modern philosophical consciousness, many trends, schools, and currents are reflected in the educational process. Most often, pedagogical theories use such philosophical trends as neo-Thomism, pragmatism, dialectical materialism, and existentialism (Behas et al., 2019).

According to the philosophical encyclopedic dictionary, the meaning of the term "paradigm" is defined as "a set of prerequisites that determine a specific scientific study (knowledge) and is recognised at this stage." The concept of "paradigm" is a set of beliefs, values, methodological approaches, and other means, as well as a model of problem solving that unites the scientific community and forms a special way of seeing (Robinson & Aronica, 2009).

If there is no scientific community, but the development of pedagogical innovations is engaged by a narrow circle of people, then the word "model" would be appropriate for "practical pedagogical activity". The concepts of "model" and "approach" are widely used in pedagogical, psychological research, and educational practice. There can be many models, and their differences are determined by the theoretical and practical potential embedded in them. A number of authors note that in connection with the evolution of scientific knowledge in the science of pedagogy, the existence of numerous paradigms that allow focusing attention on various aspects of this science is quite possible (Zhelezovskaya, Abramova, & Gukova, 2014). This is how formational, humanistic, personal, spiritually oriented, synergistic, scientific-technocratic, esoteric, andragogical, acmeological, and many other paradigms were born. Each new paradigm has its own philosophical-psychological, pedagogical methodological justification, and its followers.

In education, the principle of choosing and designing the pedagogical process according to any model, including the author's model, is proclaimed (Tomozii & Topala, 2014). The introduction of new learning technologies is impossible without the adoption of more progressive pedagogical paradigms. In this regard, it is appropriate to note that a specific scientist can develop new ideas, concepts, theories, pedagogical systems, the provisions of which may become the basis or become part of the content of a new paradigm of pedagogical science, if they are accepted by the scientific community as a model.

Currently, seven main pedagogical paradigms are distinguished in pedagogical science, with their characteristic features (Loreman et al., 2016).

1. Knowledge - a traditional classroom-lesson system of learning, when students are given ideas about ready-made knowledge, skills, and abilities, and the student himself acts as a passive object of educational activity.

2. Cultural - orients the educational process not to the assimilation of a sum of knowledge, but to the selection of elements of culture.

3. Technocratic - education and training is organised on the basis of the reproductive activity of students. An education where the means prevail over the end, and technology prevails over the common good.

4. Humanistic - a person is the highest value, focused on changing a person's way of thinking and based on moral norms.

5. Pedocentric views the issue of education and upbringing as the main factors in the child's development, where the main place is given to the teacher.

6. Child-centeredness is focused primarily on creating favourable conditions for the development of children, taking into account their individual characteristics.

7. Social - it is based on the principle of state management of society, and it determines the nature and goals of education and upbringing.

8. Human-oriented (anthropological) - personality is an inevitable value. Therefore, in the process of education and training, the interests and individual characteristics of both the child and his parents, the teacher, are taken into account first of all (Gardner, 2011). Our study involves determining the effectiveness of the scientific and practical activities of special educators and practical psychologists in the context of the educational paradigm (Wagner, 2010).

The level of development and depth of a psychologist's mind depends on their ability to predict the consequences of their actions, deeds, words, and relationships. The ability to predict - the ability to predict the course of development of events that have not yet occurred based on certain signs - is an important quality of the mind of a practical psychologist (Mashovets, 2017).

The expansion of the field of activity of psychologists in the field of education puts forward higher and higher requirements for the uniqueness of the personality of the specialist themselves. The scale of a university graduate's personality should correspond to the scale of professional tasks that modern life and society pose to practical psychologists. This, in turn, requires the adjustment of educational programmes in a higher education institution (Moyseyuk, 2007). One of the conditions for the implementation of scientific and practical activities of special teachers is the creation of an inclusive environment for children with disabilities. The main task of the professional activity of special teachers is to provide conditions for children to form an adequate self-perception, diagnosis of their physical and mental state (Giddens, 1991). The main essence of the activities of special teachers is to work with children who need non-standard approaches in their professional activities (Zyromski, Griffith, & Choi, 2021). Therefore, the activity of a special teacher involves the development of diagnostic complexes that reveal the levels of psychological, biological, and social health. Based on the diagnosis, a special teacher develops an individual development programme for a child who needs special pedagogical education (Hutmacher, 1997). A special pedagogue determines the optimal pedagogical methods and technologies for realising the goal of individual development in order to compensate for the child's problems and create optimal programmes for learning children (Hutmacher, 1997).

In philosophical, pedagogical, and psychological works, the characteristics of paradigms are often mixed with each other. The mixing of paradigms within a single study leads to internal contradictions in the setting of research goals, methods, result evaluation, and scientific inventions. This is mainly due to the fact that there is no generally accepted classification of paradigms. The complexity of describing any paradigm and comparing paradigms is also related to the fact that it is necessary to keep in mind not only its initial stage, but also all subsequent ones up to the developed one (Svetaz et al., 2020).

Each scientific paradigm is based on certain foundations that determine its content. Each of these paradigms has certain foundations, determinants and consists of two stages - primary and extended. The first paradigm, materialistic in nature, is based on a set of general principles of knowledge, where the vision of the object of knowledge appears to be independent of the consciousness of the researcher. The results of research conducted in this paradigm must correspond to specific objective laws and be explained by them. These paradigms are to varying degrees oriented towards solving the goals and objectives of education, directly or indirectly, affecting all

aspects of social life, the development of science and technology, cultural and moral values, and the spiritual and moral development of the individual and society. Effective educational practice and education reform require not only a comparative analysis of scientific paradigms, but also an understanding of how they interact with the goals and tasks of modern education.

6. Discussion

6.1. Interpretation of Findings in the Context of Previous Literature

The results of this study align with existing research on professional competence formation in special education and psychology. Prior studies emphasise the significance of *neuropsychological training* in enhancing educators' adaptability and responsiveness to students' cognitive needs. The observed *positive correlation between emotional intelligence and competence* supports earlier findings that educators with strong self-regulation skills demonstrate improved engagement and problem-solving abilities. Additionally, this study confirms that *brain-based learning strategies* effectively enhance student performance, reinforcing theories of cognitive adaptability in special education.

6.2. Practical Implications of Results for Education and Psychology

The findings suggest several *practical applications:*

- *Improved Teacher Training Programmes*: Educational institutions should integrate neuropsychological principles into teacher certification curricula, ensuring educators are equipped with cognitive-based instructional strategies.
- *Enhanced Psychological Interventions:* Practical psychologists can implement *emotion-regulation techniques and sensory-motor activities* to support students with learning disabilities.
- *Adaptive Learning Techniques*: Schools should consider *customised neuropsychological assessments* to personalise educational interventions and optimise student learning outcomes.

6.3. Challenges and Opportunities for Applying Neuropsychological Methods

While neuropsychological approaches show promise, several challenges remain:

- *Limited Awareness and Training:* Many educators lack formal training in neuropsychology, reducing the effectiveness of interventions.
- *Implementation Barriers:* Schools may struggle with integrating neuropsychological frameworks due to resource constraints.
- *Ethical Considerations:* The responsible use of neuropsychological techniques must be carefully monitored to prevent misuse.

On the other hand, these challenges create opportunities for:

- *Interdisciplinary Collaboration:* Combining efforts between educators, psychologists, and neuroscientists can expand the application of neuropsychology in education.
- *Technological Advancements:* AI-driven diagnostic tools and neurofeedback methods present innovative solutions to enhance student learning experiences.
- *Policy Development:* Educational reforms supporting neuropsychological methods can lead to *system-wide improvements* in special education.

6.4. Suggestions for Future Research

This study highlights several avenues for further investigation:

- *Longitudinal Studies:* Examining the long-term effects of neuropsychological training on professional competence development.
- *Cross-Cultural Comparisons:* Investigating how different educational systems integrate neuropsychology into teacher training.

- *AI and Neuropsychology:* Exploring ethical guidelines for AI-assisted interventions in special education while ensuring human-centred decision-making.
- *Student-Centred Research:* Assessing how neuropsychological techniques impact individual student success across diverse learning environments.

7. Conclusions

A study was conducted in which the main approaches to the educational activities of practical psychologists and special teachers in the conditions of the modern innovative world were analysed. We made conclusions regarding the main content of educational activity, which involves the implementation of an innovative, humanistic, behaviourist educational paradigm as a fundamental essential indicator of social development. We determined that the level and quality of education are the basis for the economic growth of society and the formation of conditions for obtaining well-being.

Thus, developmental classes, which have a neuropsychological approach as their methodical basis, can not only ensure the development of psychological operations as a structural part of verbal intelligence, but also create conditions for this development, since they are aimed at working with both the structure and functions of the substrate of higher mental functions.

The scientific and practical activity of practical psychologists and special teachers includes the main psychodiagnostic complexes for studying the condition of children, with the further development of an individual personality development programme for their acquisition of competence that will contribute to the socialisation and self-realisation of the child in society.

Based on the conclusions of the main content of the educational paradigm and the content of scientific and practical activities of practical psychologists and teachers, we investigated the influence of the level of professionalism of specialists on the formation of personal motivation.

The results of the study confirmed that the professionalism of practical psychologists and special teachers is a factor that contributes to increasing individual motivation, particularly in the context of achieving success and self-realisation.

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Author 2 investigated the concept of a modern educational paradigm based on neurophysiological principles and formalised his research in an article.

Author 3 analysed the theoretical and methodological approaches of the study, investigated the methodological and theoretical foundations of the formation of the activities of a special education teacher and a practical psychologist.

Author 4, based on conceptual articles, structured the content of the study according to certain structural and thematic blocks, in particular, identified key areas: theoretical, neuropedagogical, and practical.

Author 5 created an appendix to the scientific study on the problems of the work of a special education psychologist as one of the important aspects of the study.

Author 6 identified the criteria and methodology of the study as a factor in the effective work of a special education psychologist.

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