Model for assessing the formation of special (professional) competences of practical psychologists in the educational and information environment of higher education establishments under conditions of dynamic uncertainty

Elvirai Luzik\textsuperscript{a} | Nataliia Melnyk\textsuperscript{a} | Nataliia Ladohubets\textsuperscript{a} | Oleksandr Polishchuk\textsuperscript{a} | Anna Lariontseva\textsuperscript{a}

\textsuperscript{a}National Aviation University, Kyiv, Ukraine.

Abstract A comprehensive scientific and empirical analysis of the works of both domestic and foreign scientists regarding the construction of models for assessing the development of special (professional) competences in future practical psychologists within higher education technical establishments (HETE) is carried out in this article. The research aimed to create and justify an author’s model for evaluating the development of special (professional) competencies among practical psychologists in the educational and informational environment of a higher technical education institution under conditions of dynamic uncertainty. The study’s objectives included identifying theoretical approaches to examining the assessment of future practical psychologists’ readiness for personal growth and professional advancement, delineating the specifics of cultivating special (professional) competencies in these individuals, substantiating the methodology for nurturing special (professional) competencies in future practical psychologists, and designing a theoretical model for assessing the development of these competencies. To achieve these goals, various research methods were employed, including scientific analysis, systematization, generalization, comparison, and pedagogical modeling. Consequently, the conducted research delineated the structural components of the model for evaluating the development of special (professional) competencies among practical psychologists, namely the goal-forming, content-technological, organizational-pedagogical, and effective components. Moreover, criteria for assessing the development of these special (professional) competencies were established, encompassing motivational and valuable criteria, cognitive criteria, communicative criteria, organizational and operational criteria, and reflective criteria. Additionally, the research identified distinct levels of competence formation, which include the intensive-creative level, active-searching level, and reproductive-passive level. In conclusion, the model for assessing the development of special (professional) competencies was found to comprise five stages corresponding to the specialist training courses: the general education stage (first year), the subject orientation stage (second year), the operational and cognitive stage (third year), the control and assessment stage (fourth year), and the specialization stage (first year of master’s degree). Furthermore, an algorithm for managing the cultivation of special (professional) competencies among future practical psychologists has been developed, and the conditions for its successful implementation have been identified.

Keywords: special competencies, practical psychologists, educational environment, information environment, higher education

1. Introduction

In periods characterized by scientific and technical progress and rapid socioeconomic changes worldwide, the education system of Ukraine responds by undergoing continuous reformation. One prominent manifestation of this process is the internationalization of the global educational landscape. The political and cultural convergence of nations emerges as a leading trend in societal advancement during the third millennium.

In light of this context, the strategy for shaping educational paradigms, which mirror specific transformations within the education system, is recognized as a fundamental component of contemporary global social progress. Within this framework, a significant emphasis is placed on addressing the challenge of enhancing the accountability of higher education institutions in
preparing future graduates for the challenges of real life. This includes their ability to adapt to the constant societal changes, often accompanied by stress and conflicts, as well as their competence in resolving sociopsychological contradictions.

Hence, the resolution of this challenge, by imposing qualitatively new requirements on the nature of training for future practical psychologists within the realm of higher technical education, becomes one of the most critical objectives in the professional preparation of these experts. Consequently, the training process should encompass the study of pertinent academic disciplines within the educational and professional program and the cultivation of professionally significant attributes among specialists. These attributes encompass the psychological perspective (as a distinct life orientation and personal philosophy) and the resulting value structure in personal orientation. Additionally, they encompass the development of critical thinking, the establishment of mechanisms for social perception and reflection, the refinement of communication skills, proficiency in managing interpersonal interactions, self-regulation abilities, the cultivation of professional intuition, a specific self-concept, and more.

This article aims to formulate and substantiate the author's model for assessing the acquisition of specialized (professional) competencies by practical psychologists in the educational and informational environment of a higher technical education institution under conditions of dynamic uncertainty. Task for Executing the Investigation:

- To determine theoretical approaches to the study of assessing future practical psychologists' readiness for personal development and professional formation.
- To determine the peculiarities of the formation of special (professional) competencies of future practical psychologists.
- To substantiate the methodology of formation of special (professional) competences in the educational and informational environment of HETE.
- To design a theoretical model for evaluating the formation of special (professional) competencies of future practical psychologists as a condition for their personal development and professional development.

2. Literature Review

The specificity of practical psychologist activities in the technical field, as well as the peculiarities of their training in higher technical education institutions (HETE), including various levels of student training, imperfections within the educational and informational environment, and the vast amount of educational material, are determined by the priority objective of forming professional (special) competences. These competences are established on a professional and activity-oriented basis, and the expansion of this process is achieved through the strengthening of its integrity and the application of psychological-pedagogical analysis to understand the functions and features of the professional activities of future practical psychologists. Numerous scientific studies have been dedicated to enhancing the quality of practical psychologist training in technical fields (Bech, 2009; Bilyuk, 2014; Koval, 2013; Stolyarenko, 2013; Tsaras et al., 2018; Shytik and Akimova, 2018; Popovych et al., 2021; Strikha et al., 2021; Popovych et al., 2022). These analyses reveal a series of contradictions between:

1. The inherent nature of training and the comprehensive essence of modern professional activities for practical psychologists. The existing professional training typically relies on traditional forms and methods, which primarily impart knowledge within specific educational disciplines, often failing to establish a professional focus or integrity. Future practical psychologists, when engaged in real-world practical activities, especially amid the dynamic uncertainty of contemporary contexts, require the ability to address complex problems that demand the application of a broad knowledge system from relevant academic disciplines. This creates difficulties in their professional adaptation and diminishes their professional efficiency.

2. Theoretical knowledge possessed by future practical psychologists and their practical application skills when solving professional tasks in contexts marked by the inaccuracy and unreliability of information. The complexity of modern socioeconomic conditions sometimes entails handling unique tasks that demand independent and creative application of acquired knowledge and skills. Existing training approaches do not consistently foster the necessary integrated professional independence among practical psychologists for applying knowledge and skills in practice.

3. The existing educational and software support for the professional training of future practical psychologists and the actual requirements for incorporating current state and industry documentation as a genuine and scientifically grounded assessment tool for shaping special (professional) competences in practical psychologists.

4. The functional duties associated with practical psychologist positions in professional activities and the level of their integration into the educational process. Modern socioeconomic conditions necessitate a new type of specialist capable of seamlessly adapting to various production conditions and different qualification levels. The current professional training system often leaves future specialists uncertain about their functional job duties and the scope of problems, questions, and tasks they will encounter in real working environments.

5. The conscious assimilation of educational information and the professional responsibility of future practical psychologists for the final outcomes of their work within the dynamic uncertainty of the socioeconomic environment. One of the key objectives of modern higher professional education is to cultivate practical psychologists who can deliver competitive products and services to society. Nevertheless, existing training methodologies often foster an
unconscious approach to educational information, which can hinder the performance of specific actions and the provision of particular services. This is influenced by various objective and subjective factors, including insufficient levels of special (professional) competence formation, which can leave future practical psychologists unprepared for professional activities in new working conditions, such as pandemics, military conflicts, and other cataclysms.

Additionally, an analysis of socioeconomic and professional requirements for the future professional activities of practical psychologists indicates that the development of their readiness for integrated professional activities can be facilitated through the creation of an appropriate educational and informational environment (IE). Such conditions should ensure that the readiness of future practical psychologists aligns with the contemporary needs of the field. Specifically, this entails the existence of a mathematically grounded mechanism for assessing the formation of special (specialist) competences among practical psychologists within the IESHETE, while considering the dynamics of uncertainty.

The foundational concepts related to professional training and the content of professional education, as highlighted in the works of Luzik et al. (2021) and others, provided the theoretical underpinning for research into the readiness of future specialists for professional development and personal growth. However, the analysis of the process for developing professional abilities and skills among future practical psychologists, as examined through the scientific works of researchers like Semichenko (2009), Kaslow (2004), Wise et al. (2010), Pomytikina (2013), Rakhmanov (2019), and others, as well as the psychological and pedagogical conditions for forming professional qualities among higher education students (Grigoryeva, Osadchenko, Zhynukhina, Khokhлина, Pomytikina, Lych, Gorbenko, Kazak, and more), confirmed the inadequacy of attention given to the development of their special (specialist) competences.

The results of the study and analysis of the aforementioned scientific sources reveal that the concept of "Dynamic Uncertainty" pertains to the party considering the implementation of a project or new technology. This party must evaluate not only when the project is economically viable but also when to abandon a project that could potentially surpass the social standard. The concept encompasses the necessary circumstances, phenomena, factors, ways, expected outcomes, and directions that serve as external prerequisites for the existence and development of phenomena. In essence, it represents the situation or circumstances upon which a comprehensive and productive educational process for professional training of specialists depends. This process is mediated by the activities of an individual or a group of people. Uncertainty implies that both parties involved view the social standard as a safety target rather than an inflexible barrier that cannot be surpassed. The greater the uncertainty, the greater the tolerance for damages exceeding the social standard from both parties.

According to research by Kudsen and Scandizzo (2004), several key points arise:

1. For a range of parameter values related to costs and uncertainty, both parties will reach an agreement regarding the level of damage that warrants compensation. In this "Casian" solution, agreement implies that the party causing the damage is willing to pay more than the present value of expected excess damages for a damage level lower than that required for the other party to actively seek compensation.
2. The two parties will agree on both the timing and level of compensation if it can be recovered without incurring transaction costs.
3. Due to efficiency requirements, damages cannot exceed an amount determined by the social standard. However, they also cannot fall below an amount dependent on the output level necessary to achieve economic efficiency. Consequently, the joint consideration of efficiency and safety implies an inverse relationship between the size of the social standard and the payment required to eliminate the threat. Therefore, for a given payment, more stringent standards widen the range of output values for which an economic agent may decide to adopt a new, risky technology without incurring an upfront penalty. This range becomes broader as uncertainty increases and the damage rate decreases.

3. Materials and Methods

To implement the formulated goal of the research, a set of methods of scientific knowledge was used: theoretical (study, analysis, synthesis, comparison); systematization and generalization of the received data; pedagogical modeling, which made it possible to determine the advantages and disadvantages of using only special (professional) competencies.

4. Results and Discussion

Examination of the organizational and pedagogical conditions in the educational and informational environment of the HETE as didactically interconnected circumstances and ways of organizing the educational process, which according to certain criteria form a system-synergistic-activity environment and determine the effectiveness of the functioning of this process, made it possible to identify the main conditions for the formation of special (professional) competencies of practical psychologists in the OIS HETE, taking into account the conditions of dynamic uncertainty in the form of:

1) analysis of awareness of the importance of psychological support for the effectiveness of the results of the professional activity of specialists working in the relevant field;
2) Understand, on the basis of certain features of professional activity, the possibilities and importance of the work of a practical psychologist in extreme conditions;

3) Interpretation of the results of the actualization of the personal abilities of a practical psychologist for his personal development and professional development.

Based on the formulated tasks that practical psychologists must solve in their professional activities, the following organizational and pedagogical conditions for the readiness of future practical psychologists for the formation of special (professional) competences in the process of professional training in the formed educational and informational environment of a higher technical education institution were determined:

1) provision of positive internal motivation in the process of personal development and professional development of students, that is, their orientation toward the conscious assimilation of productive knowledge with the corresponding formation of integrated (professional) skills and abilities; a person's own position in the current course of events; creation of conditions for the self-sufficient development of the personality through the formation of the ability for self-education, self-development, self-knowledge and self-evaluation;

2) Implementation of professional training of practical psychologists taking into account the integrated nature of their practical activities;

3) the use and implementation of project technologies as an arrangement of a set of actions, operations, procedures and methods (research, search, problem-based) aimed at acquiring new knowledge, abilities, skills and their individual elements for the formation of components of special (professional) competencies of practical psychologists;

4) Targeted use in the process of educational activity of level differentiation and individualization of education, considering the differentiation of education as a specially organized educational and cognitive activity that, taking into account the age and individual characteristics of the subjects of education, their social experience and starting state, aimed at optimal physical, spiritual and mental development of the student, his assimilation of the necessary amount of knowledge, and practical actions according to various educational plans and programs.

In addition, a differentiated approach to each future practical psychologist implies such an understanding of the individualization of training, which consists of planning mandatory personal training results and, on this basis, higher levels of mastering the training material. In this case, the student has the opportunity to choose the volume and depth of assimilation of certain educational material to optimize the workload, taking into account his own abilities, interests and needs. The teacher, building the educational and educational process in the educational and informational environment, taking into account those features that are typical of individual differences, has the opportunity to treat each group of students differently according to the appropriate criteria, which are divided into psychological components, skills of educational work, components of education and the influence of others and biological components.

Based on these provisions, the main approaches to the implementation of organizational and pedagogical conditions with the aim of forming special (professional) competences in the process of professional training of future practical psychologists were determined, namely:

- individual or person-oriented approach to students in the process of educational and scientific activity;
- problem approach (creation of problem situations) to determine the subject matter in the project activities of future practical psychologists;
- a practically oriented activity approach (prediction in the studied projects of real problems of future professional activity that need to be solved);
- an interdisciplinary approach (the implementation of scientific and project activities, which involves the use and integration of knowledge, abilities and skills from various disciplines).

Along with the pluralization and multivector nature of educational processes, in our opinion, the activation of trends aimed at new educational information technologies, which will contribute to the systematization and diversification of the training of future practical psychologists, is fundamentally new.

Psychological and pedagogical concepts about the essence and ways of training practical psychologists of sovereign Ukraine were chosen as the general theoretical basis of the study; philosophical provisions on the optimality of subject-subject relations in the course of their future professional activity; provisions regarding the leading role of activity and methodological principles of a systematic approach to the formation of special (professional) personality competencies of the future practical psychologist; concepts of developmental interaction and activity approach to the formation of psychological culture. Conducting relevant studies by a number of scientists has confirmed the existence of specific features of the training of a practical psychologist for various areas of professional activity, which are determined by factors such as a change in value orientations and moral ideals, a transition to market relations, and the need to strengthen the national professional culture in combination with preparation for the integration of Ukraine into the world cultural space.

The hypothesis of the study was based on the assumption that the effectiveness of the formation of special (professional) competencies of practical psychologists will increase if, during training at OIS HETE, one focuses on the integral readiness of future specialists for professional activity, taking into account the features of the functions of professional communication; criteria and indicators of formation of special (professional) competences; streamlining the methodical
provision of education using the principles of professional guidance; unity of personal and professional development and role organization of the educational process.

The study of the formulated hypothesis confirmed its provenance only under the conditions of creating an open, dynamic, self-organizing and self-improving educational and informational environment, which should include the following:
- development and introduction into the educational process of integrative educational courses with a modular structure of their construction and a rating assessment of the success of knowledge acquisition and skill formation;
- the development of innovative technologies that will contribute to the formation of productive knowledge, intellectual abilities and skills that make up the structure and content of special (professional) competencies of future practical psychologists;
- create optimal conditions in the educational and informational environment for the formation, correction and implementation of productive methods, methods and strategies of interpersonal interaction in conflicting situations through the use of active sociopsychological forms of the organization of educational activities.

The theoretical results of the study confirmed the following:
- based on the analysis of the functions of professional activity, job duties of practical psychologists, and the presence of such groups of special (professional) competences as communicative, managerial, professional and personal;
- the need to determine the indicators of the formation of special (professional) competences: accuracy, argumentation, logic, completeness, originality of the use of educational tasks in all types of professional activity; communicative expediency, quality and accessibility of the presentation; persuasiveness, interest in the emotional state of communication partners; lack of desire for dominance and biased attitude, conformism; predictability, emotional stability, self-criticism;
- the validity of the criteria for assessing the level of formation of special (professional) competences in the field of process-activity factors: (nature of interaction in communicative and business situations of various types, dynamics of activity, creative use of theoretical knowledge, frequency of appeals to a teacher-psychologist); emotional reactions (satisfaction, inspiration, admiration or indifference, detachment, anxiety, immediacy, confidence, etc.); time parameters (the amount of time a student allocates to study, the duration of willpower in the process of completing educational tasks and correcting errors, the speed of response to partners’ cues);
- scientifically based organizational and pedagogical conditions that ensure the effectiveness of the formation of professional qualities in practical psychologists.

The practical component of the conducted research, due to increased requirements, new approaches and methods of training future practical psychologists in conditions of dynamic uncertainty, proves the need for constant development and practical implementation of new learning technologies: skills of the manager; culture of interaction with people and information; development of the ability to evaluate one’s own activity and demonstrate professional qualities in nonstandard situations, thus directing the educational system-synergistic process of students to independence in choosing means and methods of solving nonstandard tasks, based on one’s own knowledge, skills, personal qualities and experience; and further self-evaluation of the results, taking into account the features of the open, dynamic and synergistic environment in which future specialists will have to work.

Confirmation that the didactic basis for the development of the concept of formation of special (professional) competences in future practical psychologists is the theory according to which the content of the educational process should be carried out taking into account compliance with future professional activity; features of the specific content of practical and training tasks should be manifest in group interaction and in the ability to demonstrate one’s own competence in nonstandard situations, as close as possible to real conditions. Such tasks include not only atypical situations but also tasks that the student has not encountered before and that require him to demonstrate not so much his own versatile qualities and integrated knowledge and skills but also the ability to build special models of interaction between students in a group, as well as between the teacher and students.

In this way, the conducted research made it possible to theoretically substantiate and practically implement an optimally formulated and didactically structured model of the formation of special (professional) competences in students and future practical psychologists in the process of professional training with a theoretical justification of its structural components, the properties of which and the relationship between them determine the peculiarities of the formation process of these competencies in practical psychologists. The author's model includes five stages, which represent a meaningful and integral didactic unit, where the interrelationship of individual stages is implemented in the gradual and consistent formation of both individual component competencies and the system of these competencies in students according to the training plan of practical psychologists. At the same time, all disciplines within the framework of one stage are connected by a clear logic of the interaction of processes of continuity and continuity.

Thus, at the general educational stage (1st year), future practical psychologists learn the theoretical provisions of fundamental disciplines and the basis of future professional activity, adapt to the educational and informational environment of the HETE and form basic educational values. During this period, the motivational and value attitude of students toward the future profession and norms of scientific activity is nurtured; theoretical and practical foundations of future professional activity are laid.
At the subject-oriented stage (II year) of training, students' ability to orient themselves in the system of values of professional education is formed, namely, subject orientation to certain aspects of future professional activity takes place; a meaningful individual orientation in the researched field and professional interests emerges, and the student's scientific and professional horizons expand.

The operational-cognitive stage (III course) is characterized by students' assimilation of new special (specialist) competencies and gaining experience of actions in professional situations by means of various types and forms of educational work: seminars, trainings, collective work on assimilation of educational material, conducting projects within the framework of solving professional tasks, conducting research and experimenting with the solution of quasiprofessional tasks.

At the control and evaluation stage (IV course), the studied material is summarized, and the fragmented special (professional) competences are brought to a single logical and meaningful block with the construction of their comprehensive evaluation. The main goal of this stage is the development of future psychologists' abilities for reflective activity (self-analysis), the ability to generalize and form an adequate self-evaluation, and readiness to demonstrate what has been learned in practice by complex means of creative tasks of increasing complexity (from heuristic to research), the implementation of which will allow us to assess the level of formation of special (professional) competences among students. This stage is the final stage in the preparation of bachelors.

The fifth (specializing) stage, which is carried out in the first year of the master's degree, is aimed at checking the ability and readiness of practical psychologists to develop and apply the formed special professional competences in various problem situations through the active study of special disciplines. The main task of organizing work at this stage is to complete the process of forming special (professional) competencies of students and bring them to the required level, which determines the success of the future professional and scientific activities of graduates (Figure 1).

Based on the fact that when training future practical psychologists in the conditions of the educational and informational environment of a technical university, teaching methods can be different - from purely reproductive to interactive, the essence of the conditions for using one or another method is determined by the conditions for the success of the formation of special (professional) competences, that is, the construction of an algorithm of actions, which will allow us to reproduce (show) the level of professional training of the future psychologist with the greatest accuracy to ensure a full reflection of the future activity. That is why, considering the individual learning trajectory as a plan of pedagogical actions, which is ensured by the unity of the organization and the management of the educational process regarding the formation of the educational and informational environment of the institution of higher technical education, it is possible to single out the relevant conditions, principles and components of pedagogical activity that contribute to the success of the formation of special (professional) competencies. As a result, the projection on each axis of the generalized strategy for the formation of special (professional) training competencies makes it possible to determine (Figure 1):

- the amount of time required for quality professional training of one future specialist (study group);
- cost estimate of quality professional training of one future specialist (educational group);
- how much money must be spent for the entire period of quality professional training of one future specialist (study group).

**Figure 1** The author's structural-functional model for assessing the formation of special (professional) competencies in future practical psychologists in the process of professional training.

Thus, the projections on each axis defined in Figure 1 form the future specialist as a result - a personal learning trajectory and show the influence of the educational and informational environment on his preparation; to the teacher - a quantitative
description of personal efforts to prepare each future specialist (educational group); for the management staff of the technical university - an estimate of the training of one future specialist (educational group). This is very important because only a significant part of modern knowledge can be included in the curriculum based on the selection of the content of the initial discipline, in accordance with the essence of the strategic goals and objectives of education at various levels and stages of quality professional training (Degtyareva et al 2012).

The developed author’s structural-functional model for assessing the formation of special (professional) competencies in future specialists-practical psychologists in the process of professional training, reflecting the internal organization and functioning, certain qualities, signs and characteristics of the specified process, consists of the following components:

- goal-setting, which includes the goal, principles and approaches;
- content-technological, justified by the structure and content of special (professional) competencies of future practical psychologists;
- organizational and pedagogical, which combines organizational and pedagogical conditions, forms, methods and means of ensuring the educational process;
- effective, containing levels, criteria, indicators and prognostic methods of tracking results.

The listed components of the model, being interconnected, differ in the degree of dynamism, significance and formation mechanisms, thus reflecting an ordered collection and sequence of methods and processes that ensure the implementation of the didactic process in the HETE and the achievement of a diagnostic result. The practical implementation of the author’s structural-functional model of assessment of the formation of special (professional) competencies in future practical psychologists in the process of professional training is organized by taking into account general pedagogical principles inherent in any integral didactic system, specific principles that correspond to the principles of the competency approach and general organizational principles that are the basis for the creation of this model.

Thus, general pedagogical principles include the following:

- the unity of learning, upbringing and education, i.e., ensuring in the learning process a continuous connection between the acquisition of new knowledge and the formation of professional skills and the education of worldview culture and social attitudes;
- expediency as an optimal ratio of theoretical-methodological, methodical and practical knowledge;
- connection with life, i.e., orientation to the ability in the process of preparation to solve specific social and individual needs of applicants, formation of knowledge and skills necessary for their practical application;
- variability as the presence of correspondence of models of the content of professional education on a certain problem, depending on the characteristics of the contingent of students and the tasks of their professional training;
- the individualization of the approach, which forms the provision of elements of personally oriented learning of the pedagogical process based on the diagnosis of the initial level of knowledge and skills of students, which is manifested in the flexibility of programs and methods of activity;
- accessibility as a prerequisite for the level of teaching or the form of educational work that corresponds to the level of development and preparedness of students;
- visibility as filling the "space" between the abstract and the concrete and as providing polysensory (the involvement of as many senses as possible in the educational process);
- activity, awareness and independence in learning as taking into account the psychophysical regularities of the formation of productive knowledge and professional skills;
- unity of collective and individual forms of education.

Specific principles include:

- content polyphony as a means of ensuring objectivity and multifacetedness, stimulating different views and points of view;
- the subject-subjectivity of the positions of training participants as equal partners in the process of cognitive activity, which ensures the right to their own point of view, the choice of forms and directions of the content of the activity;
- the developmental nature of education, which presents the organization of the pedagogical process according to the laws of the functioning of problem situations;
- reflexivity as a means of improving one’s own or joint activity through self-knowledge and critical self-awareness;
- the relativity of truth, which consists of the fact that knowledge always has a relative, temporary, concrete-historical and subjective character; therefore, it is unreasonable to claim absolute truth;
- voluntariness as a free choice of a problem, which ensures the initial level of motivation of students’ activities;
- a combination of planning and spontaneity as a possible change of individual topics and forms of work in the process of technology implementation to better ones for this group or individual as a manifestation of the self-organization of the system;
- The contextuality of the model presents the maximum "immersion" of students in the space of the didactic process by implementing the appropriate forms and content of pedagogical interaction between students and teachers.

General organizational principles include:
- a combination of centralization and decentralization, i.e., taking into account national and regional requirements for
raising the level of professional training of future practical psychologists in the process of implementing a specific training
model;
- manageability as the embodiment of a complete management cycle based on pedagogical monitoring;
- coordination to ensure consistency of planning and general approaches to organizational activity;
- availability of favorable conditions for material and technical, scientific and methodological, didactic and personnel
support;
- correspondence of the psychophysiological circumstances of the schedule and mode of classes, load dosage, creation
of a positive psycho-emotional microclimate, etc.;
- self-control based on reflection on one's own activity;
- self-stimulation as self-reinforcement by achieving positive results.

Thus, the theoretically grounded structural-functional author’s model of the formation of special (professional)
competencies in future practical psychologists in the process of professional training should include two contours:
- external, consisting of principles, organizational and pedagogical conditions, functions and methodological
approaches;
- internal, which includes target, meaningful, technological, effective and reflective components, where:
  • the goal-forming component of the model reflects the following goals of training practical psychologists: mastering
the basics of professional and interpersonal communication by future specialists; mastering the system of integrated
professional knowledge, abilities and skills necessary for future professional activity; development of target orientation;
formation of cognitive independence and activity; orientation to self-organization;
  • the content-technological component of the model is a synthesis of methods, means and forms of organization of
educational work, which is implemented with the help of a step-by-step didactic trajectory, in which the tasks of each stage,
methods of organizing the process of developing special (professional) competencies and forms of training organization are
discussed;
  • The effective component of the model is an evaluation toolkit of the level of formation of special (professional)
competencies and allows us to organize the monitoring of the development process of these competencies in future practical
psychologists. The information obtained as a result of this monitoring allows us to improve the structure and technologies of
the complex of methods and the pedagogical technology of its implementation;
  • The reflective-evaluative component of the model is a tool for the level of readiness for research work, which reflects
knowledge, skills and abilities; understanding the problem and ways to solve it; and skills and abilities of research work.

The main characteristics and connections of subordination and coordination in the structure of the model of formation
of special (professional) competencies of future practical psychologists are determined by the following two vectors:
  • The vertical vector of the model, which provides systemic links of subordination, is represented by the process of
advancement from the specified goal to the solution of the set tasks and, thus, to the final result of their implementation - the
appropriate level of formation of special (professional) competencies of future practical psychologists;
  • The coordination vector in the model is represented by the links of coordination and coordination of its elements,
which allow us to expand the known provisions of the theory of professional training based on the competence approach by
the provision of the priorities of the unity of personal, substantive and activity components.

The structural and functional connections of the model make it possible to build the final result of each educational
session and ensure independent formation by students of the components of special (professional) competencies.

To successfully operate the model of the formation of special (professional) competencies of future practical
psychologists in the process of professional training, an algorithm for managing this process was developed:
1) Specification of special (professional) competencies of future practical psychologists with determination of the
content of professional competencies and taking into account the requirements of state standards by specialty (specialization)
and analysis of the requirements of employers in the relevant field;
2) the target component, which involves determining the goal: the mission and main motives of managing the formation
of special (professional) competencies of future practical psychologists;
3) planning the process of formation of special (professional) competencies of future practical psychologists, which
includes: organization of management activities of the training process: management of methodical support of the training
process; the structural and logical sequence of the study of disciplines and the creation of educational and methodological
complexes of professional disciplines;
4) Organization and implementation of managerial activities for the formation of special (professional) competencies of
future practical psychologists, which requires the implementation of planned works, creation of working groups, and direction
of specialty (specialization);
5) analysis of the results of activities and implementation of control where the verification of the actual state of goal
achievement and task resolution was carried out, as well as a comparison of the achieved result with the expected one, which
makes it possible to establish in which of the components (or at which of the stages) the discrepancy occurred;
6) Correction of activities for the formation of special (professional) competencies in future practical psychologists.

At the same time, the successful functioning of the management algorithm for the formation of special (professional) competencies in future practical psychologists, in our opinion, becomes possible if the following conditions are met:

1) Psychological and pedagogical (establishing subject-subject relationships between students and teachers; orientation of the pedagogical process to the formation of special (professional) competencies in future practical psychologists);

2) Organization (creation of conditions for exchange of experience with educational institutions; generalization and specification of work experience of specialists);

3) Didactic (student preparation for relevant practices within professionally oriented academic disciplines);

4) Methodical (development of methodical support for students during practice periods, teaching students to model professional situations, etc.), and the criterion for the effectiveness and optimal functioning of the algorithm for managing the formation of special (professional) competencies of practical psychologists is the final result, namely, a high level of formation of special (professional) competencies of practical psychologists. At the same time, the author's structural-functional model for evaluating the formation of special (professional) competencies, as well as the algorithm for managing this process, provides an opportunity to evaluate the process of formation of special (professional) competencies of future practical psychologists in the educational process of professional training in its integrity and taking into account individual elements; analyze the disadvantages and advantages of this process, and therefore make certain adjustments.

The strategic goal of every EU member state is to build innovative education. The European Center for the Development of Vocational Education and Training (CEDEFOP) has set a limit that defines the acute need for modern vocational education in new skills as a result of technological changes and stabilization. Scientists predict that new skills will be formed under the condition of an open educational and informational, dynamic and synergistic environment (Pukhovska et al, 2017).

Modern standards of higher education of higher education institutions of Ukraine lead to a change in the vector of the educational process of training future psychologists to the specifics of the formation of special (professional) competencies in them in the OIS of higher educational institutions of Ukraine, conditioned by conditions of dynamic uncertainty, accompanied by stresses and contradictions (pandemic, war, etc.) (Illichuk, 2022).

These and other features of the training of a practical psychologist in HETE determine the priority of the formation of professional (special) competences of future practical psychologists on a person-oriented basis with the expansion of the possibilities of this process due to the strengthening of its integrity, scientific and theoretical analysis of the functions and features of the professional development of future practical psychologists.

In the 21st century, the basis of knowledge should be an interdisciplinary complex, the essence of which will be a close relationship between the humanities and practical courses based on the combination of specially selected blocks of elective disciplines. Constructed in this way, the virtual educational and informational space for the formation of a competitive specialist in the HETE should be based on the results of research into its essence, mechanisms of influence on the consciousness and dynamics of the future specialist’s behavior (Melynky 2022; Melnyk et al, 2020).

We consider the solution of the problem of continuity in education for the field of "practical psychology" and the development of relevant educational programs from interdisciplinary complexes for the formation of special (professional) competencies of practical psychologists in the OIS HETE in conditions of dynamic uncertainty to be a perspective for further research.

5. Conclusions

1. The problem of forming the readiness of future practical psychologists for professional activity in the educational and informational environment of the HETE in conditions of dynamic uncertainty is one of the most relevant areas of research in the context of the professional development of an individual. Despite the significant progress of the scientific community in working out this problem, there is no clear understanding of the essence and functions of this phenomenon.

2. A necessary component of the readiness of future practical psychologists for professional activity is special (professional) competencies formed on a personal-oriented basis, taking into account the pedagogical analysis of the functions and features of the professional activity of practical psychologists.

3. As a result of the conducted research, it was established that the designed author’s model of assessment of the formation of special (professional) competencies consists of five elements, each of which, corresponding to the training courses, constructs the ability of the future practical psychologist to realize his rights and responsibilities; the ability to find and process information from various sources with the corresponding formation of abilities for abstract thinking, analysis and synthesis; the ability to work in a team and act on the basis of ethical considerations; and the ability to learn and master new knowledge and skills.

4. The developed management (evaluation) algorithm for the formation of special (professional) competencies contributes to the identification of the conditions for its successful functioning for the personal formation and professional development of future practical psychologists, thereby acting as the basis for the ability of future higher education students to adapt to the constant changes in society, which are accompanied by stress and conflicts and the ability to resolve sociopsychological contradictions in an open dynamic and synergistic information space.

https://www.malque.pub/ojs/index.php/msj
5. Considering the problem-based approach as the basis of learning and teaching methods in the educational and informational environment of the institution of higher technical education, it should be determined at the same time that the effectiveness of training future practical psychologists for professional activity depends on close cooperation of HETE with stakeholders.

Ethical considerations
Not applicable

Conflict of Interest
The authors declare no conflicts of interest.

Funding
This research did not receive any financial support.

References
Kennis I (2019) Theoretical bases of professional training of practical psychologists in the educational system of Germany under the bologna process. Technologies of intellectual development 3. DOI: 10.31108/3.2019.3.1.7
Melnyk NI (2022) Transformations of higher education in the post pandemic period in modern scientific research. Pedagogy of creative personality formation in higher and secondary schools 80:81–86. DOI: 10.32840/1992-5786.2022.80.2.15

Shandruk SK (2016) Psychological foundation soft he development to professional creative abilities of future practical psychologist, Ternopil, 458 p.


Stolyarenko OV (2013) Pedagogical conditions for education of tolerance among students of high educational institutions of a technical profile. (Author's reference for obtaining the degree of Candidate of Pedagogical Sciences). Uman State Pedagogical University named after P. Tychyny, Uman

