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## **ПРОГРАМА РОЗВИТКУ ПРОФЕСІЙНОГО МИСЛЕННЯ МАЙБУТНІХ ОФІЦЕРІВ-ПРИКОРДОННИКІВ**

### **Анотація**

*У статті розкрито структуру і зміст експериментальної програми розвитку професійного мислення майбутніх офіцерів-прикордонників під час професійної підготовки в умовах вищого військового навчального закладу. Програма складається з трьох блоків: теоретичного, практико-розвивального та емоційно-рефлексивного. Вона є комплексом цілеспрямованого впливу викладача на когнітивну потребнісно-мотиваційну, емоційну та операційну сфери майбутніх офіцерів-прикордонників. В основу програми покладено концептуальні положення теорії проблемного навчання як управління учіннєвою діяльністю академіка Ю. І. Машибиця. Складовою програми є модель, яка включає діагностичний, розвивальний та результативний етапи. В програмі враховано роль викладача і курсантів під час реалізації суб'єкт-суб'єктної взаємодії в умовах розвитку професійного мислення, а саме: урахування особливості професійної діяльності офіцерів прикордонників, психологічних механізмів навчання, формування навчальних мотивів, вікових, гендерних та індивідуальних особливостей курсантів на основі психодіагностичного обстеження; пізнавальних інтересів суб'єктів навчання, орієнтування майбутніх захисників кордону на процес розуміння задач та ін.*

*Використання програми спрямовано на розвиток розумових дій суб'єктів навчання під час розв'язування задач; уваги, оперативної пам'яті і швидкості мислення з метою набуття навичок здійснення мисленнєвих операцій під час розв'язування професійних задач; розвиток нервово-психічної витривалості та професійної спостережливості, стану очікування, оптимального робочого стану і переходу станів, а також інших спеціальних навичок. За результатами експериментальної перевірки програми виявлено підвищення у майбутніх захисників кордону рівнів знань, вмінь і навичок мислити професійно та здійснювати мисленнєві операції в умовах значних психологічних навантажень.*

**Ключові слова:** програма, розвиток професійного мислення, психологічна підготовка, модель, майбутні офіцери-пограничники.

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## **ПРОГРАММА РАЗВИТИЯ ПРОФЕССИОНАЛЬНОГО МЫШЛЕНИЯ БУДУЩИХ ОФИЦЕРОВ- ПОГРАНИЧНИКОВ**

### **Аннотация**

В статье раскрыта структура и содержание экспериментальной программы профессионального мышления будущих офицеров-пограничников во время профессиональной подготовки в условиях высшего военного учебного заведения. Программа состоит из трех блоков: теоретического,

практико-развивающего и эмоционально-рефлексивного. Она представляет собой комплекс целенаправленного воздействия преподавателя на когнитивную потребностно-мотивационную, эмоциональную и операционную сферы будущих офицеров-пограничников. Программа разработана на основе концептуальных положений теории проблемного обучения как управление учебной деятельностью академика Е. И. Машбица. Составляющей программы является модель, которая включает диагностический, развивающий и результативный этапы. В программе учтена роль преподавателя и курсантов при реализации субъект-субъектного взаимодействия в условиях развития профессионального мышления, а именно: учтены особенности профессиональной деятельности офицеров-пограничников, психологических механизмов обучения, формирования учебных мотивов, возрастных, гендерных и индивидуальных особенностей курсантов на основе психодиагностического обследования; познавательных интересов субъектов обучения, ориентирование будущих защитников границы на процесс понимания задач и т.д.

Использование программы направлено на развитие умственной деятельности субъектов обучения при решении задач, внимания, оперативной памяти и скорости мышления с целью приобретения навыков осуществления мыслительных операций при решении профессиональных задач; развитие нервно-психической выносливости и профессиональной наблюдательности, состояния ожидания, оптимального рабочего состояния и перехода состояний, а также других специальных навыков. В результате экспериментальной проверки программы выявлены повышение у будущих защитников границы уровней знаний, умений и навыков мыслить профессионально и осуществлять умственные операции в условиях значительных психологических нагрузок.

**Ключевые слова:** программа, развитие профессионального мышления, психологическая подготовка, модель, будущие офицеры-пограничники

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## **PROFESSIONAL THINKING DEVELOPMENT PROGRAM OF THE FUTURE BORDER GUARD OFFICERS**

### **Annotation**

*The article reveals the structure and content of the experimental program for the professional thinking development of the future border guard officers in the professional training system at the higher military educational institution (HMEI). The program consists of three parts: theoretical, practical-developmental and emotional-reflexive ones. It is a complex of purposeful influence of the teacher on the cognitive, needs-motivational, emotional and the operational spheres of the future border guard officers. The program is based on the conceptual provision of the problem-based learning theory as a student activities management by academician Yu. I. Mashbyts. It includes the model which consists of the diagnostic, developmental and effective stages. The teacher's and cadets' role is taken into consideration while realizing the "subject-subject" interaction in the professional thinking development process. It is recorded the peculiarities of the professional activities of the border guard officers, the psychological learning mechanisms, the studying motives formation, age, gender and individual characteristics of the cadets based on the psycho-diagnostic testing; the cognitive interests of the learning subjects, orientation of the future border guards as for the tasks understanding process, etc.*

*The program usage is aimed at the mental teaching subjects actions developing while the problem-solving, attention, operational memory and thinking speed in order to acquire the mental operations skills and habits of the professional*

*problem-solving abilities; the neuro-psychological endurance developing and professional vigilance; the expectation state, optimal working and transition psychological states, as well as the other special skills and habits. The experimental verification program results have testified about the rise in the future border guard officers' knowledge level, their skills and habits of the professional thinking and mental fulfillment operations in the significant psychological stress conditions.*

**Keywords:** *program, professional thinking development, psychological training, model, future border guard officers.*

## INTRODUCTION

### **The problem formulation.**

The problem of the professional thinking developing in the system of the professional training of the future border guards is one of the priorities in the society nowadays as it is aimed at the developing, training of the future border guard officers, as well as obtaining not only a certain educational level, but also the psychological readiness training to accept decisions of the state level in the conditions of the significant psychological stress in real time. The main task of the professional training at higher military educational institution ( HMEI) of the State Border Guard Service of Ukraine (SBGS) is to develop the ability of the future border guard officers to think professionally and carry out mental operations while problem solving in order to protect and defend the state border of Ukraine up-to-the level. The results of the program investigation of the future border guard officers' professional thinking development have testified the insufficient level of the cadets' professional thinking formation (Volobueva, Fedyk:184), which, in its turn, necessitated the development, justification and experimental verification of the author's program for the professional thinking development of the future border guard officers in the professional training system at the HMEI conditions.

### **Analysis of the recent researches and publications.**

The analysis results of the scientific sources in the various aspects of the thinking specialist's development have indicated that the modern psychological science has researched a number of techniques, forms and methods of training, support and of professional thinking development of the future officers, including border officers.

In particular the Ukrainian and foreign scientists have investigated the problem of using the latest technologies of the professional specialists thinking development at the HMEI conditions (B. G. Ananiev, Ed. de Bon, L. S. Vygotsky, V. A. Hansen, T. Busen, V. V. Davydov, D. B. Elkonin, R. Eberle, T. V. Kudryavtsev, E. O. Klimov, M. Ya. Lerner, B. F. Lomov, O. M. Leontiev, O. M. Matyushkin, S. D. Masimenko, Yu. I Mashbits, S. A. Mul, V. O. Molyako, S. L. Rubinstein, S. D. Smirnov, M. L. Smulson, V. D. Shadrikov, N. V. Chepeleva, as well as J. P. Guilford, S. R. Rogers, R. Sternberg, D. E. Super and others).

However, the issue of the professional thinking developing of the future border guard officers at the HMEI conditions has not been outlined properly that is why it is essential to be researched thoroughly.

**The article aim** is to reveal the program elements for the professional thinking development of the future border guard officers and its structural and functional model as its component in the system of the professional training at the HMEI conditions.

## RESEARCH RESULTS

The psychological analysis results of the border guard officers' professional activities (Fedyk, 2020: 63) as well as the psychodiagnostics of the cadets' mental abilities level formation (Volobueva, Fedyk, 2020: 184) testified the need of the future border guard officers' professional thinking development.

The professional thinking development of the future border guard officers at HMEI can be considered in two aspects. In the broad one – as the transaction from the academic thinking to the professional thinking, and in the narrow one – as the

transformation of the certain types and properties of the individual mental activity and their combinations depending on the characteristics, conditions, results of the professional activities: in the specific types formation of the future border guard officers' professional thinking, who have be able to accomplish responsible decisions, do self-improvement, intellectual development and self-education.

In order to develop the appropriate level of the future border guard officers' professional thinking, we have designed, substantiated and verified the program for the professional thinking development of the future border guard officers. The program is based on the conceptual principles of the problem-based learning theory as the studying activities management by the academician Yu. I. Mashbyts. The program structure consists of three parts.

The first program part includes the psychological features of the border guard officers' professional activities, psychological thinking strategies, principles and components of learning, methodological approaches, psychological and pedagogical conditions for the professional thinking, types of psychological and educational influence of the teacher on the subject of learning.

The content of the program is aimed at the future border guard officers' professional thinking development which contains the following parts:

- 1) the theoretical part, which includes the system of the scientific knowledge on the theory of the professional thinking development;
- 2) the practically-developmental part, during which the analytical, managerial, design, constructive, combinatorial professional problem-solving abilities of the future border guard officers' professional thinking have been developed;
- 3) the emotional-reflexive part, which allows the future border guard officers to focus on self-knowledge, understanding of their actions and psychological states, to develop the desire for self-improvement in the professional activities aspects.

The theoretical material learning is carried out through the various forms of lectures, particularly: mini-lecture, problem lecture, lecture-provocation, lecture

with planned mistakes, binary lecture, lecture-press conference, lecture-dialogue, group and seminar classes using brainstorming techniques, dialogue, discussion.

The need for the theoretical part is due to form and expand the range of professional knowledge, values, motives, defining professional aims, research thought processes and solving educational and professional problems, as well as the thinking strategies application. At this stage, there is a systemic teacher influence via the theoretical component for the development of high and medium level of the cadets' professional thinking.

In the process of the program theoretical substantiation, we have established the psychological factors that can influence the professional thinking development: the individual thinking properties (reflexivity, mental abilities, understanding of figurative content, speed and rigidity of thinking, intellectual lability; combinatorial abilities); the thinking styles, as well as gender and individual-typological personality peculiarities.

The program practical and developmental part is based on the learning psychological mechanisms according to the Yu.I. Mashbyts' concept, the features of the subject and subject interaction in the system "teacher↔cadet", levels classification of the educational and professional tasks complexity and the algorithm for solving them. This program part is aimed at developing the theoretical and professional thinking, its depth, consistency, independence, criticality, speed, flexibility, breadth, communication and organizational skills and habits, which are important in the professional activities of the future border guard officers. Its key task is to develop measures to ensure the sufficient psychometric indicators and quality of the cadets' professional thinking at the HMEI conditions.

The basis of training technologies is the use of business games as a promising form the educational activity that improves the professional thinking skills, allows the transaction from knowledge technologies stage to the competencies, where professional thinking is considered to be one of the professional competencies of the

future border guard officers. Game learning technologies provide the reconstruction of the activity model within the proposed scenario, in the particular:

- the educational (cognitive) game – the form of the content reproduction of the specialist' future professional activity;
- the business game – modeling of the various situations related to the formation of communication skills, discussing problems in the mode of brainstorming, etc.;
- the role-playing games – imitation of role-playing behavior in the proposed scenario conditions. Inclusion in the educational process of business games allows to satisfy cognitive, communicative, aesthetic and creative needs of the cadets, activates their mental activity (Androschuk, 2015: 6)

The third emotional-reflexive part includes consideration of the positive attitude of the future borders guard officers'. It is considered as the orientation state of the future border guard offices to the awareness of ones' research activities and oneself as its subject. This unit promotes the growth of the professionalism and is manifested in the ability to continuous personal, professional and intellectual selfimprovement, self-development based on the psychological learning mechanisms, self-analysis, self-regulation, self-esteem and professional self-control.

In this context N. V. Chepeleva and S. Yu.Rudnitska point out that self-design can act as a task for the individual (primarily a task for meaning), in the process of solving which a person has to comprehend oneself, his/her own life situation and perspective, reconsider ones' position in value-semantic coordinates, not only interpreting and reinterpreting ones' life experience, but also oneself (Chepeleva, Rudnitska 2017: 106).

The tasks of the program usage is: the professional thinking development of the abilities; the awareness of the psychological features of the profession "border guard officer"; the knowledge formation and systematization, the strategic thinking abilities; the skills and hobbits of developing of solving procedural, communicative, practical and problem (non-standard) education-professional tasks; the skills formation to accept decisions independently at the state level, to identify and adjust

the level of formation of their own professional qualities and navigate in the information space.

The successful solution of these tasks outlined above is possible by providing the following algorithm:

- the program substantiation which provides creation and realization of the psychological and pedagogical conditions of the professional thinking development defined on the basis of the theoretical analysis;
- the optimal use of the interdisciplinary links in the training process;
- the systematic monitoring of the personal educational and professional achievements of the future border guard officers, according to the certain criteria, levels and indicators of the professional thinking;
- the program development introduction into the system of the future border guard officers professional training at the HMEI conditions.

The program includes a structural-functional model of the purposeful future border guard officers professional thinking development (Fig. 1) which outlines the levels criteria, subjects and expected results of the future border guard officers training, the use of which will increase their professional thinking level. The model formation will make it possible to capture a large number of basic and accompanying elements that make influence and determine its content:

1) while designing the model of the purposeful professional thinking development of the future border guard officers (Fig. 1) we took into our consideration that modeling process is the elements system that reflects the certain aspects, links and functions of the objects, represents it in the most general form, and the model, in this way acts as a means of cognition, generalization and reproduction of the separate elements of the system in the forms of basic components and descriptive characteristics (Zaichenko, 2010: 198). In addition, the model is characterized by its versatility, because:

- firstly, its clearly identifies the components that make up the system;
- secondly, it fairly schematically and accurately represents the links between its

components, meanwhile it reflects the links within the simulated object being comparable with links within the model; thirdly, the model becomes a kind of the tool for the comparative studying of the various aspects of the phenomenon and process (Sysoeva 2013: 61);

2) psychological features of the border guard officers' professional activity taking into consideration the methodological support of the educational process, in the particular, professional, integral and other competencies have been presented.

Due to the fact that the learning process is long and gradual, in the context of its analysis, it is necessary to take into one's consideration all the causal, subjectsubject and other components. In this regard, our designed model is formed by three interrelated stages, the implementation of their main tasks in the end, will provide, in our opinion, the ability to think professionally and perform mental operations by the future border guard officers: diagnostic, developmental and resultative stages. (Figure 1)

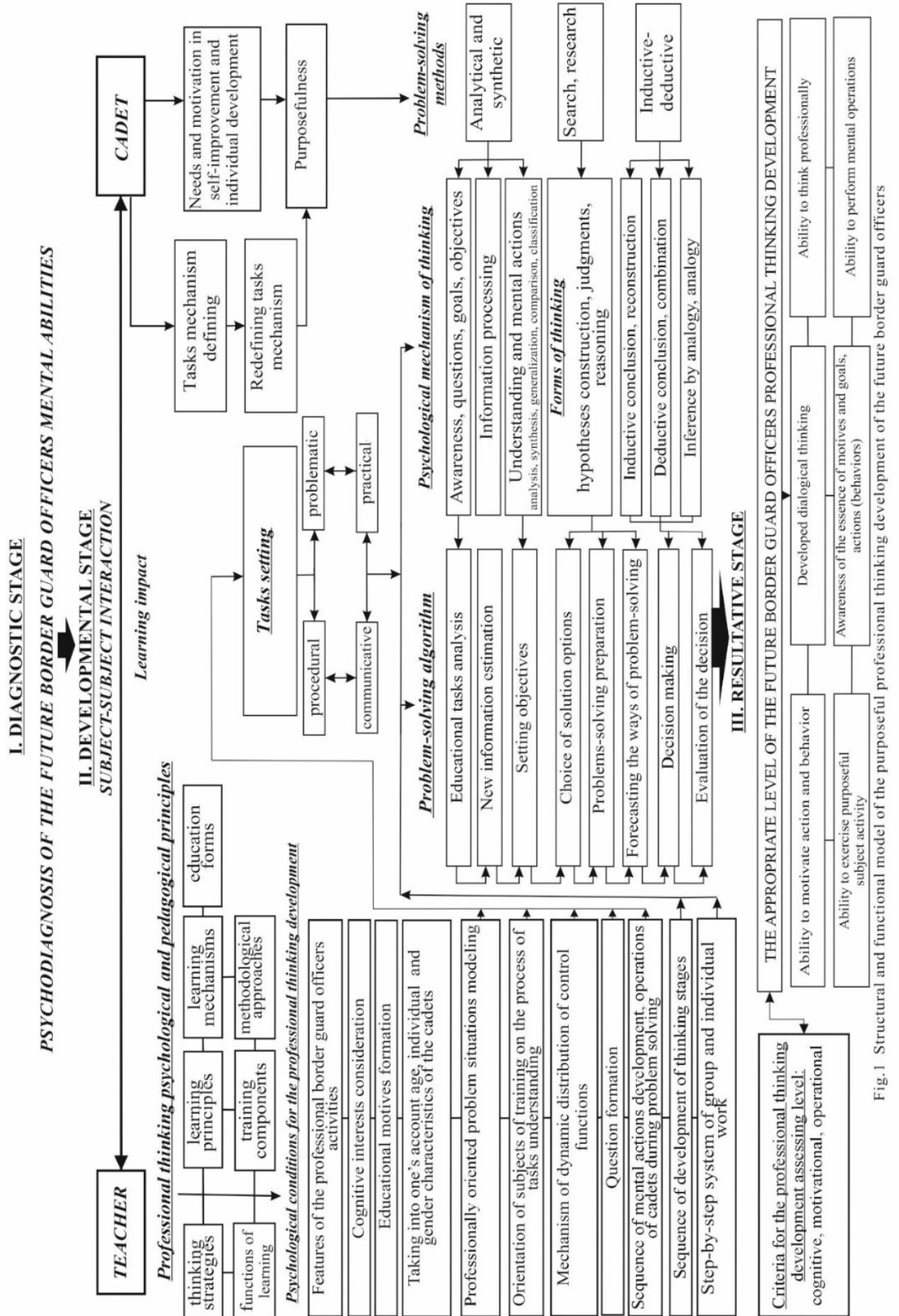


Fig.1 Structural and functional model of the purposeful professional thinking development of the future border guard officers

We have described each of the proposed stages, through the definition of their essence and key objectives. *The diagnostic stage* involves taking into account the age, gender, individual and individual-typological characteristics of the cadets, based on the psychodiagnostic testing of the future border guard officers mental abilities. The list of these tools includes such methods as: “MLO-AM”, “Ravenna”, “Confused lines”, “Red and black tables”, “Numerical series”, “Compas”, “Analogies”, “Figures”, “Composition”.

*The developmental stage* of the model involves the implementation of subject-subject interaction. At this stage the role of the teacher and the cadet in the professional thinking development process is of vital importance. The teacher creates the psychological and pedagogical conditions for the professional thinking development on the basis of thinking strategies, principles and mechanisms of learning, taking into account the functions, forms and components of learning, as well as the methodological approaches. For the cadets’ professional thinking development it is important to take into one’s consideration the peculiarities of the professional border guard officers’ activities, their cognitive interests, educational motives forms, age, gender, individual and individual-typological characteristics of the cadets’ personality, based on psychodiagnostic testing identified at the previous stage. At this stage it is essential to model the professionally-oriented problem situations (education-professional tasks) as well as the orientation the subjects of learning on the process of understanding the tasks. In addition, another important condition for the professional thinking development is the teacher's consideration of the psychological mechanisms of learning in a phased system of interaction both in a groups and individually, as well as the need to ensure a sequence of stages of cadets' thinking at the HMEI conditions, based on the algorithms and psychological mechanisms and thinking process in the following sequence:

- 1) at the analysis stage of the educational tasks the cadet is aware of the issues, goals and objectives;
- 2) there the evaluation of the new information is taken place
- and 3) while setting the task the cadet processes the content of the received

information through one's understanding and application of the mental operations (analysis, synthesis, generalization, comparison, classification, etc.); 4) at the stage of solutions choosing 5) preparation of solutions and 6) forecasting the idea of solving problems, the cadet uses such forms of thinking as the construction of hypotheses, judgments and reasoning. The algorithm of solving problems is going to complete so 7) the decision making and 8) their evaluation during which the cadet formulates his/her own inferences: inductive, deductive and by analogy. In order to optimize the thought processes at these stages, the teacher actively helps the cadet to apply thinking strategies by using combination analogy and reconstruction.

During the professional thinking development process the cadet actualizes his/her own motivation for self-improvement and individual development, providing purposeful solution of the educational and professional problems by such methods of solving them as analytical-synthetic, exploratory, research and inductive-deductive one's.

*The final resultative stage* of the model determines the appropriate level of the future border guard officers' professional thinking by such criteria for assessing the level as: cognitive, need-motivational, operational, as well as the relevant indicators of the professional thinking level: high, medium and low. At this stage, we have included the result of this process - the ability to think professionally and perform mental operations, which determines: 1) the developed dialogical thinking; 2) the ability to motivate action and behavior; 3) to carry out purposeful subject activity and 4) to realize the essence of motives, the purposes and actions (behavior) in the conditions of the higher military educational institution in which the initial purpose was coordinated at the beginning.

The proper cadets professional thinking development we have taken into our consideration the main specific features of the professional border guard officers activity: the security connection with the reality practical design; time constraints in the mental operations processes; inclusion in the thought processes of the elements of the real situation.

Among the main methodological approaches, we have identified the following: activity, competence, cognitive and systemic one's. The important components of the professional thinking development are:

- the motivational and activity component (means motives, needs, professional attitudes and values of the professional thinking);
- the cognitive and reflexive component (means the optimization of the content of the development of professional thinking while learning in the system of the HMEI).

We would like to point out that the methodology of the system approach is widely used in the modern research papers of the future specialists training in the various fields of activity by B. F. Lomov, S. D. Maksimenko, V. D. Shadrikova, S. R. Rogers and others. Most often, the system approach in psychology is defined as the method of the theoretical and practical research, which assumes that the mental process, phenomenon or state of personality are considered to be as the system (Maksymenko, 2004: 48). Revealing the possibilities of the methodology system, V. A. Ganzen emphasized that in psychology the system approach allows to integrate and systematize the accumulated knowledge, overcome their redundancy, find invariants of psychological descriptions, avoid shortcomings of the local approach, increase efficiency of the system researches and learning process, formulate new scientific hypotheses and create systematic descriptions of mental phenomena (Ganzen, 1984: 3 – 4).

The peculiarity of this approach is that the system is studied as a single organism, taking into account the internal connections between the individual elements and external connections with other systems. Considering this, the use of the system approach has allowed us to develop the comprehensive universal program for the professional thinking development of the future border guard officers, as the holistic system that creates the optimal psychological and pedagogical conditions for its implementation in the learning process. That means to involve all its components: the scientific-pedagogical staff, configuration of the academic disciplines with fixation of program, special (professional) competencies and competencies which

are chosen by choice at the HMEI conditions, forms and methods of professional training, etc.

The theoretical program ground is based on the conceptual principles of the system, active, competence (Shvalb.,2010: 33) and praxeological approaches in the system of psychological and pedagogical influence organization on the cognitive (Shevchuk, 2016: 243) sphere of the future border defenders taking into consideration the psychological features of the professional border guard officers activity in their professional and special training process.

We have also used the activity approach substantiated at the scientific researches by B. G. Ananiev, L. S. Vygotsky, S. L. Rubinstein, S. D. Maksymenko, D. E. Super, R. Sternberg and others. Exactly within this approach the individual is being seen as an activity subject that determines his personal development through the activity and communication. This approach assumes the basis of the professional training of the personality of the cadet: his motives, purpose of activity, his age, gender, individual psychological and individual typological constitution.

The activity approach is based on the development of professional qualities of the individual through the activity also on the unity of personal and subject activities in the learning process, on taking into consideration individual characteristics and needs of the individuals at every stage of professional training.

While developing the program, we have used the praxeological approach, which provides the purposeful training for the implementation of activities in order to achieve its effectiveness outlined in the scientific works by V. V. Kozlovsky, A. M. Kolesnikov and others.

The praxeological approach is the methodological concept that allows to understand the individual activities, and also his/her professional, in the process of interpersonal links in terms of its effectiveness, identifying actions that prevent effective cooperation, identifying and eliminating barriers of optimal interaction, investigating the opportunities, potential and unused reserves, making propositions to improve the efficiency of activities at each stage of preparation and implementation, planning future actions, preparation for the future activities,

analysis, comparison, comparison of goals and results (Shevchuk, 2016 :241) Using this approach is allowed us to identify the professional skills system that has to be formed and act as a component of their readiness for the professional activity the future border guard officers.

In the program we have also used the competency approach, which is the methodological basis of the practice-oriented learning, means a balanced ratio of basic, academic education and training, with an emphasis on the personal component. It is the competence approach focused on the result - the formation of a competent specialist in a particular professional field who can work effectively in a constantly changing society, freely navigates in difficult situations of their profession, has the professional competencies (Litvinenko, 2015: 164). In addition, the competency approach focuses not only on the current demands of the social practice, but also takes into account its prospects. This makes it possible to prepare a specialist who will strive for professional self-improvement, intellectual development and is open to new professional experience.

During the development and implementation of the program, we used to the principles that, in our opinion, ensure its effectiveness, particularly humanism, scientific, optimization and rationality one's.

The principle of humanism is central, basic in practical psychology. It provides for the orientation of the professional training process of the future border guard officers on their comprehensive development, including professional growth. The introduction of this principle in the educational process involves the cooperation and interaction of teacher and cadet, their dialogue in the process of becoming of the future border guard service specialists.

The use of the scientific principle involves the inclusion into the program formation of the future border guard officers professional thinking as the reliable scientific data and the results of special research.

This principle involves the disclosure of causal links of the phenomena, processes, events and is implemented in the content of the program.

The optimization and rationality principle is the optimal combination of general, group and individual forms of organization of the educational process and the rational use of modern methods and learning means for the implementation of the proposed program.

The level of neuropsychological stability, personality self-esteem, sense of importance for the environment, level of conflict, experience in building contacts with people, focus on moral norms of the society, the degree of group norms at military team are among the psychological characteristics that determine the successful professional development of the border guard officers (Filipov, 2004: 79)

Having analyzed the psychological thinking strategies of the border guard officers, we would like to emphasize that we consider the professional thinking developing as a transition from academic to professional thinking, as well as the transformation of certain types and properties of thinking in training to form the specific types of professional thinking. The evolution of professional thinking is closely connected with the mental development of the individual, including intellect. The professional intellect is a complex of functional system that provides tentative search activity and decision-making at the professional sphere, the result is the professional strategies and actions. Within the professional training period, while studying at university, there is a common formation for all types of the professional thinking qualities - purposefulness, lability, thoroughness, speed and flexibility as indicators of activity of thinking and formation of such types: figurative, associative, logical, conceptual, practical, theoretical. In the context of psychological mechanisms, it is also important to consider the processes of thinking, which is consist of the reproduction of the objective reality by means of speech and practical actions, which is the highest psychological cognition stage (Pavelkov, 2009: 244).

We also agree with the position of such researchers as S. D. Maksimenko, J. P. Guilford and others, who emphasize on close interaction and interaction between mental and practical activities and also emphasize that the development level of thinking determines to what degree a person can navigate the world around onwself,

dominates over circumstances and over himself/herself (Maksimenko, 2004: 281; Guilford, 1967: 197).

The analysis results of the thinking strategies implementation in solving professional problems by the border guard officers allowed us to identify three main strategies of professional thinking: the strategy of analogy, combination and reconstruction (Fedyk, 2020:16).

At the same time, we would like to stress that the key position in the assessment of psychological thinking strategies is the perception of the following idea not as an autonomous process, but also as a theoretical component of perception of reality and practical, including professional activities, which in this turn determines the future border guard officers training and the need to find and implement psychology-pedagogical principles that will ensure the permanent activation of their professional thinking.

That professional thinking is possible by providing at the HMEI interactive forms of the various types of classes and strategies of psychological and pedagogical influence on the consciousness and cadets' thinking, the main purpose of which is to form their active attitude to mastering their chosen profession, making them initiative and creative.

The active use of the interactive forms of classes as the means of educational influence through the psychological mechanisms of learning during the future professionals training process in the HMEI conditions are the following:

- the management of the educational activities of study subjects in order to acquire some theoretical knowledge, professional thinking skills and abilities;
- they are the basis for the formation of appropriate conditions and full functioning of the developmental and cognitive educational process, which is actively involved in the subject as a component of the management system, which contributes to the development of one's professional thinking and independent ability to manage educational activities;

- the use of the professional tasks system combining the psychological learning mechanisms allows the teacher to predict the stages and equality of the psychological and didactic influence on the professional thinking development of the future professionals.
- taking into consideration the specifics of educational and professional tasks can contribute to more optimal and full compliance with the principles of selection, methods of formulation, diagnosis and use of educational tasks during training at the HMEI conditions.

The advantages of the active learning forms, to our opinion, are the following:

- mental activity forced activation;
- learner is forced to be active regardless of his/her desire;
- long-term, not short-term, episodic nature of the activity;
- independent creative decision-making in the learning process, increasing the degree of motivation and emotionality;
- constant cadets interaction with their teacher through its direct and feedback connections.

The proposed forms of lecture are based on the following contextual learning principles:

- the problem-solving principle, which involves the presentation of teacher material in the form of problem situations and involving cadets in joint analysis and search for solutions;
- the principle of play activities, appropriate for activating the attention of listeners, relieving emotional tension, making the creative atmosphere and formation of cognitive motivation;
- the dialogic communication principle, which takes place in the form of external and internal dialogue;
- the joint collective activity principle, which allows to create an active, creative and emotionally positive atmosphere;

- the duality principle, which consists of the introduction of game elements of the lesson: the first - conditional, game; the second is real, aimed at the formation and development of abilities and skills in the specialty.

In order to intensify the cognitive activity of the future border guards, it is necessary to use the interactive means of the psychological and pedagogical influence during seminars and group classes. The effective method of conducting them is brainstorming. It is a method of solving urgent problems, which achieves a high level of problem solving and improving the quality of the future professionals training to identify the unique ways out from situations, to increase their creative thinking level, to find alternative ways out of situations, develop observation, ingenuity, communication skills (Frich, 2015: 94). This method is two-stage problem solving model: the new ideas generating, understanding of each and selecting the best of them.

Another one technique that should be used to stimulate thought processes is the Socratic dialogue method. It is used to learn cadets to evaluate critically their knowledge and thus improve and enhance their acquired skills. Some new professional knowledge is formed by asking questions and finding the right answers to them, which determines the development of productive thinking, the ability to express their thoughts, critically approach their own views and show tolerance for other people's suggestions, which, in this turn, enhances the development of professional skills, interest in mastering the chosen profession.

While developing the practical exercises for the professional thinking development of the future border guard officers, the SCAMPER method, developed by researcher R. Eberle, was used to stimulate the super situational thinking processes. This technique promotes the formation of new ideas and helps to overcome stereotyped thinking. It is based on seven techniques: replace (Substitute), combine (Combine), add (Adapt), modify (Modify), apply (Put), remove (Eliminate), swap (Reverse) (Mikalko, 2007: 356).

Also we used the method of “Method of six hats” by Ed de Bono. This method helps to overcome difficulties in solving practical and problematic (non-standard) education-professional problems by dividing the thinking process into six different modes, each of which is presented in the form of a metaphorical hat of a certain color, which promotes concentration, stability and flexibility. The method allows us to structure mental activity, both personal and collective one’s (Bono Ed, 1997: 137).

At these classes the effective organization conceptual apparatus for the professional thinking development in the following categories is revealed to: “thinking”, “professional thinking of border guards”, “thinking strategies”, “tasks”, “professional tasks”, “stages of decision-making”; “motivation”, “values”, “needs”, “the psychological features characteristics of the professional border guard officers activity”, “mechanism”, “psychological thinking mechanisms”, “psychological learning mechanisms”, the system of “subject-subject interaction”, “ways of effective communication”, “construction of the effective thinking at communication activity in the conditions of considerable psychological loadings in a real and limited time mode”.

In order to ensure the proper professional thinking development in the program the provisions of problem-based learning has been implemented (according to the concept of the subject activities management by the academician Yu. I. Mashbyts, as well as psychological learning mechanisms). Also we consider them as a theoretical construct that describes the interaction of the components of the system that ensures its functioning (Mashbyts, 2001: 3). The psychological mechanisms work on the developmental nature of learning, closely interacting with the purposeful and natural change process, while self-learning as the highest subjective learning level, corresponds in this case with self-development, providing its knowledge, resource, etc. (Fedyk, 2020: 9].

The analysis of the concept of Yu. I. Mashbyts is demonstrated how important in the process of the professional thinking formation is the system of subject-subject interaction “teacher↔subject of learning”. In this case, the content,

psychocorrectional and intellectual-mental orientation of the educational and professional tasks allows the teacher during training to ensure effective interaction, as well as to implement a combination of the certain types of the psychological and pedagogical influence in solving educational and professional tasks in the system of professional learning of the future border guard officers. This, in this turn, overcomes the uncertainty of the educational and professional environment, which arises due to the fact that the acquisition of knowledge and skills, development of the professional thinking and implementation is already mastered cognitive schemes involve certain positions that are filled by the subject. It is about the presence of subjective fears, difficulties, uncertainty, confusion, disorganization. If the learning subject while the professional training at the HMEI can overcome his/her fear, can solve educational and professional problems and make decisions in the situation of choice, then the educational subjective activity should reach the success. The nature of this influence is not so unambiguous and, as it turns out, largely depends on the professional and value orientations system of the future border guard officers and how they affect the development of other personal qualities (Smirnov, 2001: 80).

That is why in the process of professional learning of the future border guard officers it is necessary to learn the educational and professional problems solving algorithm. In order to improve the psychological and pedagogical influence effectiveness on the professional thinking development of the cadets, while the presentation of educational material, the teacher has to explain the psychological features of the transforming of any mental problem from the objective to the subjective type.

As for this, a certain typology of mental tasks is proposed. Thus, the teacher needs to prove to the subjects that any mental task consists of an objective and subjective (psychological) structure or an objective and subjective environment of the professionally-oriented tasks. During the psychological and pedagogical influence on the processes of the future border guard officers professional thinking

development, a certain starting points are needed, which in psychological sources are defined as “task environment”.

Thus, in an objective task environment, we define two concepts: “task requirement” and “task condition”. Note that these two concepts are completely independent of the subject. Both subjects must realize and accept as a fact, at the same time, on the way of accepting this position as a fact, a complex psychological problem arises, which is the transferring from the objective structure of the task to the subjective (psychological). That is, the “task requirement” should move into a subjective category and become the “goal of the task”. This process is called the goals formation or task understanding, the process of its assignment, its awareness by the subject of study (Gippenreiter, Petukhov, 1981: 295).

We may define any educational and professional tasks according to four difficulty levels.

Level I is characterized by awareness of the content and objectives of the problem, in this context, the reproductive (R) and productive (P) type of thinking prevails, there is a restructuring of the problem condition from the objective to the subjective psychological component;

Level II is characterized by an understanding of the problem, but the lack of means to solve it. Understanding, in this case, is represented by the clarity of the wording of its objective structure. As for the means of solution, they can be reproductive (algorithmic, the search of all available options) and productive (heuristic, the search of working rules for solving the problem);

Level III complexity is characterized by the availability of tools, but complete uncertainty of the problem conditions. This type of task can be called goal setting task. These tasks require a certain level of specific professional knowledge of the subject, but this knowledge does not have a certain relationship between goals and means. In fact, in tasks of this type, the subject may propose new goals that go beyond the original data;

Level IV complexity of tasks is characterized by the lack of understanding and means of solving. This is a very complex type of problem, and the only possible conditions for its solution are inductive, intuitive options.

Thus, in problems of the first and second types, the unit of analysis is a separate tool, and in problems of the third type, the unit of analysis is a certain design of means, or in other words, typical or individual strategies for problems solving. All these types of problems are focused on the processes of their solution and the fourth type allows to identify a certain logical sequence (causal logical sequence) of the act of translating the objective structure of the problem into a subjective one (Gippenreiter, Petukhov, 1981: 296).

Regarding the algorithm for solving such problems, first of all, it should be noted that it is a process of understanding a certain problem related to future professional activity, building a hypothesis, its solution and practical implementation of the planned solution. That is, as we see, the solution of the educational and professional problems is a complex procedural cycle, within which we have identified the following interconnected and interdependent phases and stages, namely:

- diagnostic-analytical phase, which includes an analytical stage, which begins with the analysis and evaluation of the situation and ends with the formulation of the problem which should be solved;
- constructive phase, which combines the stage of planning and design, where the hypotheses of the solution, specific ways of solving the problem, the draft decision is developed;
- executive phase related to the implementation of the plan, with the practical implementation of the developed project and evaluation of decisions and their results.

Thus, the solution of the educational and professional problems is a complex, multifaceted, step-by-step and, at the same time, creative process, which is characterized by the principle of continuity, characterized by the fact that solving the

problem does not complete the solution, evaluation and analysis. The identifying of new problem aspects or the new problems that should be solved, and then there is a return to the first stage, where a new problem is identified and new possible solutions are formed.

The solution of the educational and professional tasks is carried out in the following stages:

- the first stage - formulation of the question: there is a comprehensive analysis of the educational task, there is an assessment of new information and tasks are formed;
- the second stage involves finding ways to analyze and build working hypotheses, while which the choice of solutions, preparation of solutions, forecasting the plan and problem solving;
- the third stage is the final and most important in the process of solving educational and professional problems, in fact, their solution - the generation of possible solutions, decision-making and evaluation.

Our proposed model for the development of professional thinking of future border guards reflects the entire cycle of the process of solving educational and professional problems by future border officers at the HMEI conditions. Some stages of the process can be combined, and it is also possible to use additional stages.

The main learning means with a practice-oriented approach is a situational (practice-oriented task). A situational task is a problem that contains the specific situation description, usually problematic. They are divided into three main types:

- tasks, the content of which is related to other disciplines (interdisciplinary tasks);
- tasks, the content of which is related to practical reality;
- tasks, the content of which is related to the future professional activity of subjects of the studying (Dolgorukov, 2012).

The advantages of using situational practice-oriented tasks are: a variety of sources of information, the collective nature of cognitive activity, the forced process

of acquiring knowledge, which significantly enhances the balance of theoretical and professional components of the future border guards officer learning, creates optimal conditions for their professional development (Sidorenko, 2001: 184).

## CONCLUSION AND PROSPECTS OF THE FURTHER RESEARCH

The investigation results of the professional thinking development of the future border guard officers have given us the opportunity to draw the following conclusion:

- 1) the development of professional thinking is an important component of the professional future border guards officers learning at the HMEI conditions, which ensures future successful performance of the professional tasks, effective management decisions in the field of protection and defense of the Ukrainian state border in the conditions of significant psychological stress in real time;
- 2) the program of the professional thinking development of the future border guard officers in the system of SBGS professional learning will promote of their professional thinking development, active mental activity, realize the importance of the chosen profession, form motivational attitudes to the success and further intellectual self-development;
- 3) while the experimental verification of the program the obtained empirical results of the criterion are higher the critical one's, which indicates about the significant differences between the respondents of the control and experimental levels of professional thinking criteria into 14-27% each (Volobueva, Fedyk, 2020: 185). So it means that the program is valid;
- 4) the structural and functional model of the purposeful professional thinking development of the future border guard officers, as part of the program of professional thinking, is a set of the purposeful influence of the teacher on the cognitive, emotional, needs-motivational and operational spheres of the future border guards based on the professional activities, taking into consideration the age, individual psychological and gender characteristics of the cadets personality.

Unfortunately, the volume of the article does not allow the author to reveal all the components of the program. The further research way is the development of practical recommendations for the HMEI teachers on the use of the program for the professional thinking development of the future border guard officers in the training process.

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