Professional competency of modern specialist: means of formation, development and improvement

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SOCIO-PEDAGOGICAL AND PSYCHOLOGICAL CONDITIONS OF PROFESSIONAL TRAINING OF FUTURE SOCIAL PEDAGOGUES IN THE MODERN SYSTEM OF HIGHER EDUCATION OF UKRAINE

Abstract. *The authors analyze conditions of improvement of professional training of future social pedagogues. The article scrutinizes groups of socio-pedagogical and psychological conditions and proves their effectiveness. This paper makes an effort to prove the need for improvement of civic engagement, independence, firmness of purpose, openness of students. It has determined and analyzed psychological components of professional training for future social pedagogues: psychological readiness for professional activity, psychological competence, motivational component, effective procedural component. All the components are treated as a unified system.*

Introduction.

The modern system of professional training of future social pedagogues in Ukraine is characterized by constant changes in the legislative framework that affect the specificity of professional readiness. The state regulatory texts directing the development of the Ukrainian higher education (National Strategy of Development of Education of Ukraine Till 2021 (2012), Ukrainian Law on Education (2016), Law on Higher Education (2014), Project of the Concept of Development of Education of Ukraine from 2015 to 2025, the Presidential Decree on the Ways of Enforcement of the Education Development Priority in Ukraine (2010)), and other regulated statutes recognize integration in the European and world educational framework as the main guidance for the development of professional training system. It can serve as a prediction of restructuring of not only the higher education system, but all its components. One can expect the arrival of a new generation of people able to enter freely to the world community, to socialize and to fulfil themselves. Thus, professional training of future social pedagogues deserves special attention as their leading function is to assist the person in dealing with socialization, self-transforming, and self-fulfilment issues in the changing society.

The system of professional training of future social pedagogues in Ukraine possesses several discrepancies which affect the development of practitioners: the necessity of active introduction of the European experience of person-oriented education in the system of socio-pedagogical work, and the insufficient level of economical, political, and other systems of the country; main professional functions of the social pedagogue, and their uneven realization in the society; the practice of socio-pedagogical activities that includes work with a certain category of population, and lack of possibilities for learning methods of socio-pedagogical work at the sufficient level, as the professional training of future social pedagogues has a wide range of competences; the importance of practical component for effective professional training of social pedagogues, and the existing limit of classroom hours in the modern university system for the development of practical skills in the authentic environment.

The constant exposure to the above-mentioned discrepancies leads to the loss of faith in personal professional abilities, the downgrading of the profession. It prevents the social teacher from creating their own private practice, and subsequently denies them additional material resources. This very conclusion has been further proved by the results of the descriptive experiment embracing 1062 students of the Social Work, and Social Pedagogy majors of bachelor, master, and specialist education levels of full-time and part-time departments of the Ukrainian universities. According to the results, the majority (69%) of students demonstrated *low level* of readiness for professional work. They typically lack aims in their professional activity and personal lives; they are easily influenced by the others; they struggle to specify positive aspects of their personality, skills, and preferences.

The *medium level* is at 23%; at this level students are expected to possess plans for future concerning their self-fulfilment, but they do not take any specific practical steps showing wait-and-see attitude. They show only fuzzy perception and weak understanding of their strengths. They lack the ability of rational distribution of their efforts and often experience fatigue. In co-operation with other people they sometimes take the subject position, but change it quickly. Only 8% of students show the *high level* of professional readiness possessing the following features: distinct plans for self-actualization in the future; taking real practical steps to reach the set goals; active social engagement (participation in scientific competitions, projects) and life position; using hobbies as means of reaching personal goals; a strong subject position in co-operation; rational usage of free time.

Thus, the professional training of future social pedagogues requires the creation of special socio-pedagogic and psychological conditions of the education process benefiting the improvement of the existing professional training system.

1. Socio-pedagogical conditions of professional training of future social pedagogues in the modern higher education system of Ukraine.

The analysis of existing scientific paper on professional training of future social teachers shows that a great number of works deals with socio-pedagogical aspects of professional training, e.g. works by A. Kapska, H. Laktionova, M. Lukashevych, L. Mishchyk, V. Polishchuk. At the same time, despite the high significance of the studies done, the issue of creating special socio-pedagogical conditions of training of future social teachers has been insufficiently covered in those sources.

Using the analysis of the definitions of *conditions* in philosophy [1], psychology [2], pedagogy [3; 4] literature, and taking main challenges of higher education in consideration, we have defined the essence of *socio-pedagogical conditions* as the complex of objective possibilities of the environment that correspond to internal features of personal development and contribute to formation of an independent, socially active professional able to deal with personal, work, and social issues.

As the first condition in the framework of the education experiment, we offer the inclusion of the future professional in different activities contributing to acquiring professional knowledge, skills, and, subsequently, self-confidence. Such activities can be voluntary work in different organizations dealing with socio-pedagogical issues; participation in international and state projects, organizations, student unions. Future social teachers got acquainted with work of different youth organizations, learnt to locate different unions of both international and state levels on the Internet, and optionally applied for different programs and projects. This very activity enables future social teachers to function as an open independent unit of the socio-pedagogical system, develop practical skills, and enrich themselves with the international experience. For instance, students got acquainted with the capacities of the following international organizations: AIESEC, Enactus, Global Nest, Granite, etc.

AIESEC is a youth leadership movement. It is an international youth non-profit and non-political organization fully run by students with the purpose of locating and developing the leadership and professional potential for making positive changes in the society through organization and realization of socially meaningful projects. Enactus is an international non-profit organization which unites students, teachers, and businessmen using entrepreneur action for raising life quality and life standards of people with different needs. Global Nest is an international association of scholars, technologists, engineers, and other interested groups taking part in all scientific and technological aspects of the environment and employing sustainability-oriented methods. The *Granite* international organization works in the framework of the *Young Trainer School* project aimed at humanitarian students, particularly ones majoring in psychology and pedagogy, willing to act as a facilitator or an assistant trainer. The Foundation of Regional Initiatives (FRI) is the biggest Ukrainian

youth public organization that unites young people from all the regions of Ukraine. Its activities promote cultural pastime and arts. The UReport youth project enables its participants to offer their own idea about solving social problems of a certain region and Ukraine in general and to learn other opinions on important social issues.

We have determined the next socio-pedagogical condition of training a future social teacher as creating possibilities for introducing different material resources; lobbying of socio-pedagogical work issues and drawing attention of the society to them. One of such methods contributing to realization of the above-mentioned tasks was the method of project management (creating projects and obtaining grants for their implementation). While studying the issue of creating socio-pedagogical projects, the students learned to determine project aims, structure, goals; to choose activities for the project; to create project roadmap and its budget; to anticipate results and effectiveness of the project.

A British scholar Mark Brown determines the main demands to project goals as: consistency with functional goals of the business/organization; measurability in the following categories – quality, quantity, time, cost, and specific end product [5].

A well-designed project always contains the following components: a brief history of the organization; goals of the project; the mission of the organization, and how it correlates with the project; the description and social value of the issue the project is aimed at; clear project aims; implementation plan for each aim together with description of methods; detailed chronological list of actions aimed at the project implementation; description of responsibilities of each project participant, and the participants' qualifications; detailed budget with budget items and available resources; detailed explanation for budget items; attached price lists; letters of support verifying experience of the organization in the given field; documents proving the ability of the organization to implement the project. The success of the project also depends on the following: orientation at interests of all the parties involved in the project (all parties need to profit from the project implementation); assessment of the practical basis for the project implementation; ensuring clear logistics, meaning that the planned amount of work has to be reasonable about the amount of resources needed; supporting possible optimization of certain activities.

While analyzing the specific features of creating socio-pedagogical projects, we drew the students' attention to the remoteness of pedagogical result and peculiarities of co-operation in Human-Human and Human-Society systems, to the difference between project goals and aims. Future social teachers in the process of their professional training should learn to create attractive projects for the sponsor taking their interest in the project realization in account. One can talk about the development of students' skills to sell their intellectual product that is a merchandising of a kind. This notion is actively used in economics and is a specific marketing technology realized at the level of retail traders.

Merchandising as an applied discipline combines knowledge of advertisement types, methods of psychology and sociology, principles of composition and design.

Merchandising is a physical placement and preparation of goods at the point of sell that stimulates the customer to make spontaneous purchases, and also exact presentation and thorough knowledge of the merchandise [6].

French experts Alain Welkhoff and Jean-Emile Mason note that merchandising is a complex of methods and ways to help selling goods at the sale point [7].

Using this notion in the aspect of creating social products in the socio-pedagogical work, one can speak about adhering to the rules of writing, designing, and implementing certain requirements to improve the project attractiveness. The social project is a product aimed at drawing the attention of participants, sponsors, society.

In this light the future social teachers studied the following questions of organizing and designing social projects: problem choice and analysis; determination of priority groups; complex evaluation of the problem field; choosing activities; discussion of the project feasibility; structure and requirements of the project form (compliance to the donor's priorities; activities in the project framework must conform to the strategy; the project results must be grounded and desirable; the project budget must be realistic and in accordance to the planned activities; the project must be sustainable and perspective; experience and sufficient resources, qualified personnel needed for the project implementation must be available; there must be faith in the necessity of the project implementation); rules of creating a *logframe*.

The special importance in the process of training social teachers was assigned to teaching skills of using PR-technologies in socio-pedagogical work. PR technologies (public relations technologies) require using different communicative means to draw attention to the problem, creating a new model of public consciousness, mentality, attitudes in the society. That is why future social teachers learnt principles of street social work; using mass media to attract attention to socio-pedagogical problems; rules of creating social advertisement, managing charity events; art of public speaking and presentation of opinions on solving socio-pedagogical issues. Students also developed their skills of scientific work (academic writing, creating articles and abstracts, conference speeches).

Studying at high school is a complex and difficult process requiring the student to have high levels of consciousness and activity, extraordinarily high intellectual effort, concentration, mobilizing will, high working capacity, self-organisation, rational time management. To this end, the students mastered skills and knowledge of the following topics: Student Time Budget, Methods of Quick Memorization, Perception and Memorization of Lectures, Effective Work with Scientific Literature. It contributes to students' quick adaptation to university studies and rational organization of cognitive activities.

The diversity of student life (classroom studies, individual work with information sources, participation in public and cultural events, different meetings, etc.) requires the student to have a leading idea, a personal life meaning, a favorite activity, or otherwise crises and disappointments are sure to arise. That is why the next socio-pedagogical requirement of future social teacher training is formation of their worldview position that calls for the development of leadership skills, positive life attitudes, and healthy physical and mental lifestyle. These goals are realized both in and outside classroom work. For instance, students learnt to detect fatigue signs in time, and mastered methods of mental and physical recuperation during their studies of professional deformation. Sports activities were promoted particularly strongly among students, with the influence of physical exercise on the human organism explained in great detail.

Revitalizing influence of physical exercises lies in stimulation of intensity of biological processes in the body. It is determined by the fact that the cerebral cortex sends impulses to the locomotory system and simultaneously stimulates vegetative nervous system centers. Intensification of endocrine gland activity improves the functioning of the cardiovascular system, the respiratory system, metabolism, and different defensive mechanisms, including immunobiological ones. Rotations of exercises stimulating nervous system excitation (rapid strength exercises for major muscles) and ones inducing inhibition processes (breathing exercises, muscle relaxation exercises) contribute to the recovery of normal mobility of nervous processes (Popov, 2005).

Participation in sports benefits physiological processes as well as formation of leadership skills. The organization of the rehabilitation process includes communication with different people, on which the effectiveness of the rehabilitative influence on the junior teenager depends. That is why the focus on leadership skill development, forming of leader psychology and worldview of future social pedagogues in the process of professional training is of great importance

Success of professional activity and any activity of the personality depends on their attitudes, emotional state the person in question currently resides in. It is common knowledge that the nervous system coordinates all the organs and system of the organism. It has been experimentally proven that negative emotions lead to damaging biological and chemical disorders resulting in illnesses and lowering of immune systems of the organism. That is why a special importance during professional training of future social pedagogues should be assigned to establishing a code of sanogenic behavior that includes skills of resisting all the negative factors harmful to physical and mental health. A future social teacher should be able to resist internal discomfort and external disharmony. Recognizing health and personal freedom as the highest values is of utmost importance. These skills include the removal of internal “killers” preventing the person from fully enjoying life and feeling content with it. Every future professional has their own internal barriers such as

fear, anxiety, and lack of confidence. External negative influences made by clients, managers, various social conditions have to be taken into consideration as well. To counteract those, a future teacher has to master different methods and techniques of restoring physical and emotional well-being.

To this end, the students were given exercises changing the internal structure of the ego (value system, attitudes to themselves and the others, sets, aims, interests, dreams, aspirations). They require evaluating the student's self-confidence level, self-attitude, and the degree of orienting for success. For example, the following exercises can be used: «What step am I at?», «Colour of emotions», «Success formula», etc. This group of exercises contributes to the desire for personal growth, concentration on the necessary goals, estimation and normalizing of self-esteem, etc.

For example, in the framework of Human Lifestyle topic the students dealt with the main factors determining the emergence of illnesses, lack of success, and dissatisfaction with life. In so doing, the stress was put on the correct attitude to errors in professional and any other types of activities, forming the readiness to reach the goal and set aims in practice. While studying the topic *Worldview and Its Connection to the Socialization Processes* the students got acquainted with the following notions: factors of personal development, system of values, and its influence on personal life quality, life perception and understanding.

It enables students to better understand ways to form optimistic life attitudes, to set themselves for success in their undertakings, and to contribute to creating the feeling of happiness as a norm of personal life.

2. Psychological conditions of professional training of future social pedagogues in the modern system of higher education of Ukraine.

Professional training as a process ensuring readiness of the future expert to the professional activities develops and activates efforts and professional consciousness only when the cognitive activity of the future social teacher happens in conditions close to practical professional activities; that means conditions when cognitive and theoretical activities are compared with professionally oriented activities. As the social pedagogue is a significant figure in the social sphere as a subject of the general and professional culture in the role of an organizer, a manager, and an immediate executor of social work, the psychological training of social pedagogues must ensure formation and comprehensive development of a competent, competitive, intellectual, creative expert with an active social position, ready to make a conscious choice of the personal position in the professional activities in the social sphere. Activity aspects of social work acquire special topicality, as the reality demands using not only different forms and methods of work adequate for the new needs of society, but also a special content aimed at real help to people. Practical implementation of activity approach in social work requires not only getting future social

teachers acquainted with new methods of social work, but serves as a scientific foundation for researching effective mechanisms and psychological conditions of adapting those methods to concrete clients with taking into account development perspectives and determining their place in life.

The content of psychological conditions of professional training of future social pedagogues is determined by interpenetration of the three main methodology approaches existing in the world practice of professional training of social workers:

− individualism that regards professional activity as the activity of a single social worker in the framework of the state approach and tasks of social policy;

− collectivism that regards social (socio-pedagogical) work as a form of organization of joint actions aimed at solving social issues;

− reflective humanism that regards this kind of professional activity as an interpersonal cooperation based on humanistic values and aimed at contributing to personal socialization [10; 11; 12; 15].

Nowadays in Ukraine as well as in other countries of the world there is an ongoing discussion of the notion that teaching social work should not only passively reflect social development, it must actively search for ways of solving appearing social problems. Professionals of the social sphere should be trained in such a way that they are capable of changing, removing, and correcting negative social phenomena in the society. And that can be possible only in educational establishments building their teaching on the new basis and taking into consideration the social policy tendencies in the country.

The social teacher training is done through forming specific professional skills, One of the main tasks of the professional training of social pedagogues is immediate focus of teaching on forming psychological and professional competences of students on the basis of mastering professional knowledge and skills of work with different categories of clients in their future practice. In that regard, we stress the importance of the following psychological components of professional training of future social pedagogues: psychological readiness for professional activities, psychological competence, motivational component, effective procedural component, personal component, productive component.

The analysis of the existing scientific works showed that psychology of forming the readiness for professional activities, mastering professional knowledge and skills by the student had been studied by a number of scholars including: H. Ball, V. Bocheliuk, L. Dolynska, S. Maksymenko, Y. Milerian, V. Moliako, M. Priazhnikov, V. Rybalka, M. Smulson, etc.

The preparation to professional work primarily includes development and formation of the personality that gets a certain profession based on social and psychological foundations directing the process of professional preparation to the successful emergence of a future professional. From our point of view, the professional is a psychologically mature,

comprehensively and harmonically developed personality who uses knowledge acquired during studies and aims to realize their professional and practical skills, and creative abilities successfully in the professional sphere. As a rule, the maturation of the professional's personality has its own peculiarities determined by the object of activity. In its turn, the professional training of social teachers must be committed together with taking into consideration perspective requirements set by the professional activity. The result of professional training is readiness to professional activity.

We specify the following components in the structure of the psychological readiness for professional activity:

- positive attitude to a certain activity, profession;
- professional traits of character adequate for the professional requirements;
- necessary knowledge, abilities, skills;
- stable professionally significant features of perception, attention, thinking, emotional and will processes;
- presence of professionally beneficial psychological states of interest, concentration, mental well-being.

From our point of view, the psychological readiness for professional activity is the integral personal phenomenon that includes firm aspiration for work in this field, presence of adequate knowledge, abilities, and skills, and also a complex of individually typological, socio-psychological peculiarities ensuring high efficiency of professional performance in the given field; purposeful expression of the personality including their ideas, attitudes, motives, feelings, will and intellectual qualities, knowledge, abilities, skills, sets, etc. [9].

Psychological readiness for activity is regarded as a uniform expression of the personality, and by the readiness for activity we understand a specific personal state that requires the subject to have an image of action structure and constant orientation of consciousness to its fulfillment.

Thus, readiness is a complex structural phenomenon that includes motives directing students to the recognition of the necessity to solve tasks. It is a result of training students for the professional activity at universities.

So, the readiness of a future social pedagogue to the professional activity is a complex of features and phenomena of the personality determining the abilities and ensuring successful completion of all professional functions of a professional of social profile. The readiness simultaneously serves as means of increasing efficiency of professional activity. The necessity of forming psychological readiness of future social pedagogues to professional activity is determined by objective needs for competitive employees that meet the world standards.

The training of future social teachers in higher educational establishments should ensure the full process of forming psychological competence in the professional activity as a

pre-requisite for reaching high competitiveness. Psychological readiness is highly significant in work with clients in crisis situations who typically show acute psychological manifestations: lowered level of trust, rise of conflicts, domination of negative emotional states, uncertainty, lowered work motivation, etc.

Psychological competence of a future social teacher is a structured system of knowledge of the human as an individual, individuality, a work subject, and a personality included in the individual or joint activity and enacting different social interactions. Psychological competence in the socio-pedagogical sphere can be regarded as a complex of knowledge, abilities, and skills in psychology; clearness of the position regarding the role of psychology in the professional activity of a social pedagogue; skill of using psychological knowledge in socio-pedagogical work with clients; ability to see beyond the client's behavior and determine their state, level of development of cognitive processes, emotional and will sphere, traits of character, ability to orientate, evaluate the psychological situation in relations with a person and a group, and choose a rational mode of communication; to enact a pedagogically correct influence on the client's state of mind for a prolonged period of time for their harmonious development. As a system, psychological competence consists of several relatively independent, but interconnected substructures: socio-psychological, socio-perceptive, autopsychological, communicative, and psychological and pedagogical competences.

The socio-psychological competence based on socio-psychological peculiarities of different categories of population and mastery of skills of interaction with those categories allows the social pedagogue to solve the whole spectrum of clients' problems in juridical, professional, social spheres. The substructure of socio-perceptive competence plays an important role in perception and understanding personal peculiarities of the client, their psychic and emotional states in the extreme crisis conditions influencing their behavior. The substructure of autopsychological competence includes reflexive knowledge and personal professional qualities ensuring high psychological endurance, influencing the environment, readiness for acting in crisis situations, leader behavior that lead to trust from clients. The substructure of communicative competence is a system of knowledge about kinds, forms, methods, and factors of efficiency of business, work, trusted communication; about methods of psychological influence on partners, and their peculiarities in the conditions of constrained communication affected by extreme factors; about the influence of negative emotional states on perception, understanding, and processing of information; about the system of special communicative skills enabling effective interaction, influencing the communication partners in different situation of cooperation and in different emotional states. The substructure of psychological and pedagogical competence includes knowledge and skills of stabilizing moods in relationships, forming trust, certainty, beneficial moral and psychological atmosphere [13].

The motivational component of professional training of future social pedagogues includes professional cognitive, social, and personal motives of studying. Professional cognitive motives include wide cognitive needs, interest in getting professionally specific knowledge and skills; an important social motive of getting an education, according to students, is getting a relevant position and career advancement. Personal motives of studying for students are needs for self-development and fulfillment. The motivational component expresses the conscious attitude of the future professional to the professional activities. It is a linchpin holding main qualities of a professional, as the nature of participation in educational and developmental processes together with the achieved results depend on the way a social pedagogue motivates their readiness for the activity.

Motivational readiness, receptivity to psychological and pedagogical innovations is an important trait of an educator, as only the motivation adequate to the professional activity aims assures effective work and manifestation of the social pedagogue's personality.

The effective procedural component embraces the parameters characterizing the development level of professional abilities; skill of determining the general and the culturally specific features in different societal strata; skill of successful co-operation with the members of one's own group as well as of other groups dissimilar in different aspects; creative attitude to work, adherence to principles and exactingness, social responsibility, readiness to make well-grounded decisions; ability to mobilize one's personal potential to solve different tasks; ability to analyze processes taking place in the sociocultural space, their influence on the efficiency of professional activities; ability to single out sociocultural problems arising in the process of co-operation; ability to co-operate in different social groups (a team, a corporation, a group); ability to orientate and make decisions in different situation of social interaction; ability to resolve conflicts; tolerance to the environment (including everything provoking unwanted reactions and unwanted behavior); mastery of business etiquette and speech ethics; ability to create well-meaning, beneficial atmosphere in the process of sociocultural interaction; critical thinking; high creativity in problem management; ability to lead business meetings, discussions, debates, negotiations; ability to participate in creating joint projects.

Ability to operate the received special knowledge in the internal plane of the individual consciousness provides students with the possibility of getting situational and perspective data about objects and general social environment, the opportunity to predict the outcomes of professional interaction, to plan personal professional activities, to form individual opinion on the worldview, and to develop personal style of professional work for its maximal efficiency. Many scholars stressed that the success of work depends greatly on concatenation of content and direction of the system of life values of the individual and the choice of activities adequate to the meaning of the activity; on the extent of knowledge of the individual about themselves and their professional prospects (L.S. Vygotskyi,

O.M. Leontiev, E. Fromm). This combination is expressed in individual character features of a student. Those features correspond to the chosen profession and acquire a great importance in the human-human sphere of professional work as human personality is the object of work in this case. That is why a future social teacher should have a clear idea about their personality, its qualities, and abilities.

These ideas and a fully formed mind image of a social pedagogue are going to provide a student with opportunities for consecutive personal transformations aimed at further development of personal qualities that meet the requirement for a social pedagogue.

Thus, we deem it necessary to specify the following constituents in the personal component: responsibility, tolerance to other opinions; ability to condone mistakes; honesty, sincerity, sensitiveness; ability to accept another point of view; industriousness; organizational skills; adherence to principles; observational skills; interpersonal skills; reasonableness; empathy; independence; ability to see and evaluate the situation from different angles.

The knowledge of oneself as a personality leads to understanding oneself as subject of the future profession, understanding of others (a social service client as an object of professional activities of a social pedagogue) that is an important psychological condition of professional training of future social pedagogues. Taking that into consideration, we stress the importance of reflection in the structure of the personal component. Reflection is manifested in the adequate self-appraisal of conformity of personal trait system to the personal requirements for successful professional work, and also in the ability to constantly evaluate and analyze perception by other people (A.V. Krutetskyi, V.S. Merlin, and others).

For a social pedagogue reflection is a process of receiving knowledge of internal psychic acts and conditions, awareness of a subject about his image in the eyes of other people or communities. It is an important aspect of profession.

In the process of learning reflection helps students to get generalized knowledge about world and themselves. It assists in noticing contradictions, incompatibility of some thoughts, actions, and principles that, in its own turn, activates an internal dialogue turning self-knowledge and self-training in conscious consolidation of new desirable behavior elements. It manifests itself in acquiring special knowledge, skills, and professional values in the process of learning with their gradual accommodation to personal qualities, professional skills, and personal system of life values of a student. The interiorizing of that knowledge and those skills is done through reflexive interpretation of the received information as well as through the transition to the interior plane of consciousness. The need for reflection as means of cognitive understanding of the situation appears in conflict situations, group discussions, and negotiations. We should also stress the role of reflection in problematic episodes of social life when a person’s actions are not regulated by rules, and the person has to construct their own behavior.

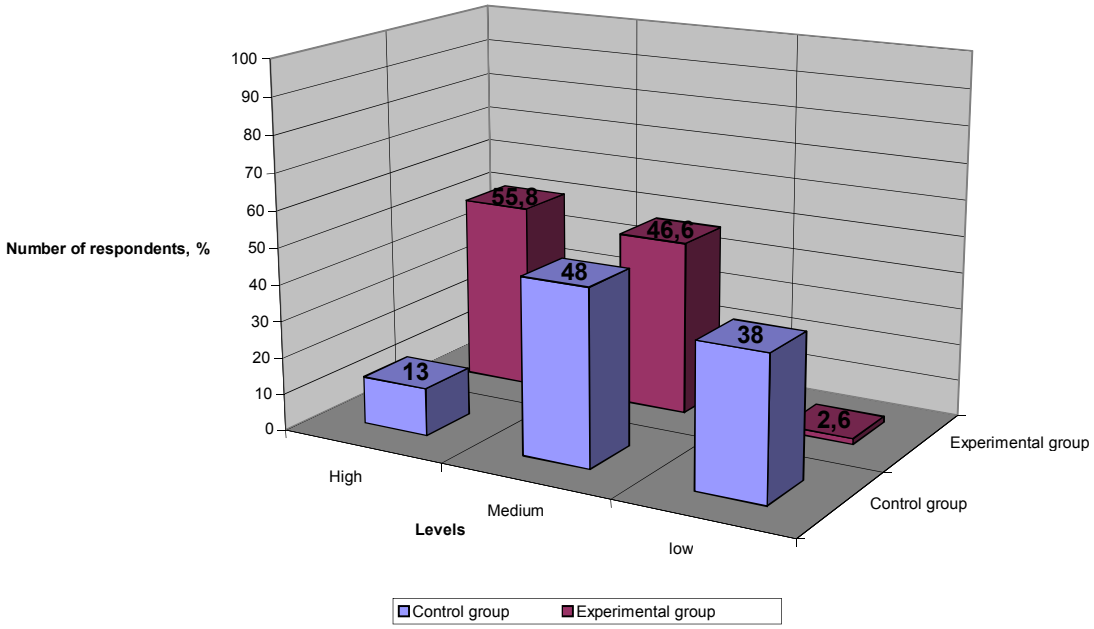

Fig. 1. Histogram of respondent division according to levels of professional readiness

The solutions made by a social pedagogue in the process of work have to do not only with the specific problem the client is addressing, but with the entire life as well. The life vector of a client can depend on the solution. So, social pedagogues have to be conscious about the responsibility not only for their decisions, but also for their consequences as well. S.L. Rubinshtein is pointing out that reflection determines the moral position of a personality, the moral responsibility for actions done and not done. Reflection helps to understand feelings of another person after an action. Reflection develops the ability to evaluate oneself and others realistically; to find the reasons of failures and overcome them; to find rational moments in one's own work and work of others; to think dialectically.

Thus, the generalized results of the forming experiment and their comparison with the results of the check experiment allow us to draw a conclusion about effectiveness of the presented socio-pedagogical and psychological conditions of training future teachers at universities. We have registered positive dynamics in the experimental groups during the forming experiment. For instance, high level has increased by 42,8 %, medium level has gone down by 1,4 % in experimental groups (thanks to the considerable growth of percentage of students at high level), and low level of professional readiness of students in experimental groups has decreased by 35,4 %.

The results of development of professional readiness of future pedagogues to socio-pedagogical activities are represented in the histogram of the distribution of respondents according to the levels of professional readiness. The histogram shows graphically expedience and efficiency of the experimental study.

Conclusion.

Thus, creation of the following special socio-pedagogical and psychological conditions of training future social pedagogues: activity in the professional sphere, including the international level; creating possibilities for introducing different material resources; ensuring successful and quick adaptation of students to the university conditions; purposeful formation of worldview position oriented at positive perception of the world; psychological readiness to the professional activity, psychological competence, motivational component, effective procedural component, personal component are going to contribute to increasing of readiness to professional activity and ensure forming of student activity in realization of their own life plans; purposefulness in reaching goals; openness in social functioning at the level of both the country and the world; the independence in thoughts, in realization of principles of vital activity, and in communication.

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PSYCHOLOGICAL PROVIDING PROFESSIONAL COMPETENCY OF METALWORK PROFESSIONALS IN UKRAINE AND CHINA

Abstract. *The creation of an ergonomic methodical approach to the processes modernization of metallurgical production management, which involves a human factor at the difficult man-machine system development and exploitation and the realization degree estimation of ergonomic requirements on the different stages of operator`s activity planning. An analytical model of the organization of the research works devoted to the ergonomic modernization of man-machine systems was developed. Searching and purpose-oriented investigations on the different stages of man-machine system development and exploitation were modelled from the sketchy projection till the exploitation of the system. Theoretical, system analytical and experimental methods were used. The results of processes ergonomic modernization of metallurgical production management were discussed in two countries under new economic (market) conditions. The factors, which define the tension in rolling-mill operator`s activity, were exposed. Some recommendations on modernization of the existing technology and labor organization were formulated.*

Introduction.

Difficult and strenuous conditions of the operator`s/ metallurgist`s activity demand a due approach to the whole man-machine system optimization. This approach must consider all the operator`s activity features (psychological ones first) and include appropriate research methods and ergonomic planning ones. The consideration of psychological factors in the development of new technical means of activity and modernization of the available ones is an indispensable condition to realize their economic efficiency.

1. Analysis of recent researches and publications.

The methodological basis of the research was G. Zarakovsky`s ergonomic providing concept of the men-machine system development and exploitation [8]. The problem of increasing the efficiency of the “Rolling-Mill” man-machine system operating isn`t new. As a result of the analysis of some theories which concern rolling-mill operator`s activities and were published in different time researches, we can distinguish some real-life approaches to the issue.

A technological approach is aimed at the local automatization and the commitment of the rolling mill during a shift as well as at the idle times of the rolling mill and their reasons. A sanitary and hygienic one is aimed at the assessment of the complexity and tension in rolling-mill operator`s activity. And an ergonomic approach is mostly reduced to the rationalization of control panels and organization of work stations. Foreign researchers (G. Bedny [1], I. Brito [2], A. Chapanis [3], I. Foley [4], G. Thu [6]) define technology features and the level of management automation as the external determinants of psychological tension and stressful factors in the activity of metallurgical unit operators. An analysis of modern foreign ergonomic and psychological literature revealed the presence of theoretical assumptions of the operator`s activity optimization in different countries (G. Zarakovsky [8]). The ergonomic direction of metallurgists` activity optimization, which developed fragmentary in Ukraine and China, continues our research.

Operators of continuous broadband rolling mills have been examined in two countries. The research was conducted under production conditions of the Dnipro Metallurgical Plant and the "Buncy Steel" Steel Mill, which have a cooperation agreement among themselves [5]. The subject of the research was an ergonomic provision of optimization of rolling-mill operators` activity and its correlation with the production efficiency of socio-technical systems (see the figure 1). The psychological, physiological and psychophysiological factors of intensification of metallurgical production technological processes were studied.

The purpose of the research is to define the influence features of ergonomic and psychological factors on the activity efficiency of continuous broadband rolling mill operators in the conditions of metallurgical enterprises modernization of the two countries.

2. Methodology

The hypothesis of the research is that the directed influence organization of psychological factors allows optimizing the operators` activity and thus increasing the efficiency of modern socio-technical system of rolling mill production.

The first group of methods contains a traditional job analysis including observations, interviews and conversations with experts; an analysis of fabrication documentation and official instructions and regulations; an identification of metal processing mode violations by operators, emergency situations and production idle times. The age of operators, their sex and length of service were recorded.

The survey was carried out to determine the subjective attitude of operators toward the objective factors of technological process modernization, which affect upon the occupational stress and psychological tension occurring in the workplace, and to identify the main motivational aspects of operator`s activity. An algorithmic analysis of the operators` activity was based on the observation and examination of the fabrication documentation. A control algorithm analysis on the rolling mills of the same type of ingots was carried out according to the standard compression program.

The purpose of the analysis was to compare quantitative characteristics of the operator`s activity on the control of the main electric drive and the associated machinery.

We haven`t only used the algorithm characteristics to estimate the cognitive complexity of the algorithm. The data obtained as a result of the operators` activities analysis were also considered. The heart rate (HR) and adjusted hand tremor data were used to assess the dynamics of the operator functional state. The dynamics of the heart rates was considered in the research as an integral characteristic of the functional tension of the organism in productive work, which is followed by psychoemotional excitement.

The heart rate measurement was carried by electrocardiography. The frequency of hand tremor was measured by a digital tremometer.

Hand dynamometry was used as an indicator of operators` fatigue.

A group of psychological techniques was aimed to analyze the impact of professional activity on operators` mental functions connected with receiving, processing, storage and playback of information. Some methods of studying memory, attention and processes of thinking were used to investigate the commitment of the mental functions. Memorization of numbers and their further reproduction were used to study memory.

Tables and proofreading tests were used to study attention levels. Characteristics of distribution (d) and concentration (co) of attention were determined. A concentration level was calculated due to the proof tests by the formula 1[7]:

$$X_{\text{co}} = (0{,}5436 \cdot N - 2.807 \cdot n)/T, \quad (1)$$

Xco– the level of attention concentration (information processing rate, bit/s);

N – the number of proofreading test signs seen for an hour T;

n – the number of missed or mistakenly crossed out signs for an hour T.

The distribution of attention was estimated by the operating time (To) with the first ten pairs of numbers from the black and red table. The quantity $X_d = К_d/T_o$, where $К_d$ is the normalizing coefficient, was used to characterize the distribution of attention (Xd).

The time of the row numbers addition (Tth) was used to estimate the indicators of thinking in the formula 2[7]. It was determined as a sum of the time for the task solution (Tthp) and the "penal" one (Tthp), which was equal to the difference module of the received result (Cr) from the addition of simple quantities of the proposed election numbers and the actual value (Ca),

$$T_{\text{thp}} = |C_r - C_a|, \text{ and } T_{th} = T_{ths} - T_{thp} \quad (2)$$

The quantity $X_{th} = К_{th}/T_{th}$ with the normalizing coefficient Kth= 100s was used as the indicator of thinking. The characteristic of memory (Xm) was defined in points as Xm = 5 – q, where q is the quantity of mistakes and number permutations at the reproduction of the remembered number.

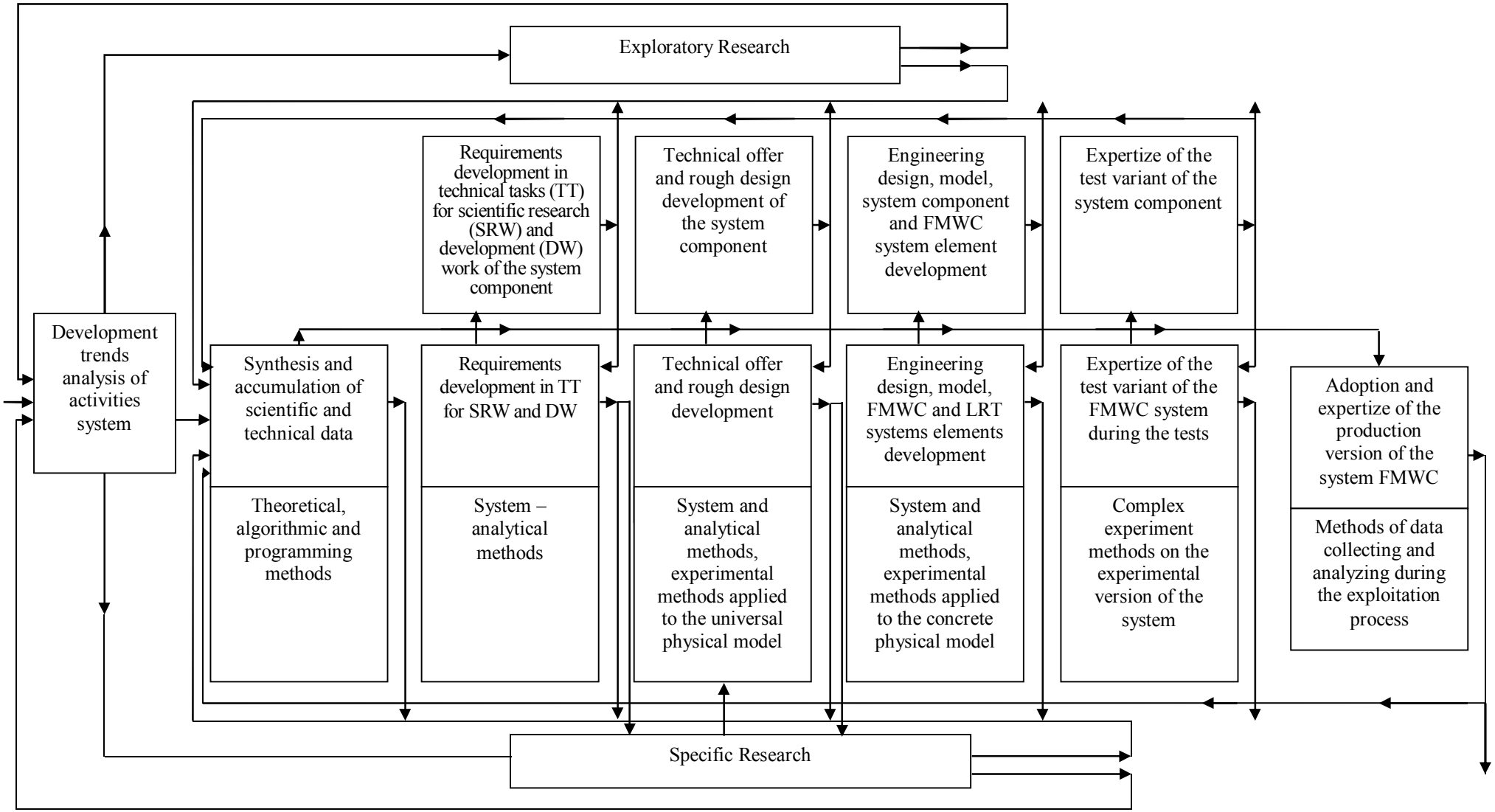

Fig.1. Activities Organization Model on the Ergonomic Provision of Man-Machine Systems

Notation: 1. TT – technical tasks, SRW – scientific research work, DW – development work, FMWC – formation and maintenance of the working capacity , LRT – laboratory research tests . 2. Discontinuous arrows indicate the connection with society needs.

Reactive anxiety (RA) and personal anxiety (PA) were determined by the Charles Spielberger and Yuri Hanin`s self-rating research technique.

The following sequence of testing was applied: cardiography, tremorometry, dynamometry, number memorization (15 seconds of showing), proofreading test, red and black table, number reproduction. The total operating time of each mentioned methods allowed carrying out workplace examinations.

A special expert survey was used to assess the quality of the work. The operators` activities were estimated by the experts on seven parameters - efficiency of the activity, fulfillment of the process requirements and processing programs, quality of the ingot production, quantity of the mistakes made while the activity, coordination measure of control functions in the operator`s activity, control character of rolling mill drives and operator`s attitude to the assigned work. The first six parameters describe operator`s professional skills. And, together with the seventh one, they characterize the operator`s input in the production process. The experts were a production supervisor, a shift engineer, a rolling mill deputy manager and three of the most experienced operator-instructors. The professional activity of each operator was estimated by nine experts. The consistency of the expert evaluations was checked.

Lusher test was used to study aspects of the functional state of rolling mill operators and their attitude to the factors of modernized metallurgical production [6].

All of these methods were adapted in accordance with the professional analysis rules of rolling mill operators` activities analog systems and prototypes.

Two hundred rolling mill operators from Ukraine and China took part in the research. In other words, one hundred men and women at the age from 17 till 46 years old were taken from each county. They were compared by the age and gender parameters.

3. Basic material presentation

Traditional methods of mathematical statistics in the interpretation by G. Z. Bedny were used to process the results [1]. A decomposition of the socio-technical management system to subordinate subsystems with a systemically important role of active operators` activities was carried out and the activity complexity was estimated.

The complexity assessment indicators of control algorithms during one rolling cycle are given in the Table 1.

Among the key factors, that determine the complexity and intensity of professional activities, operators distinguish organizational and technological ones. The operators of the most productive and newer mill of the “Buncy Steel” Metallurgical Complex in China evaluate the occupational stress higher than Ukrainian rolling mill operators.

We should note the high reliability of differences in the all mill operator`s assessments of the operational tension and the degree of influence on the activity of technological and organizational production factors ($p<0,01$). Some significant differences in operators` assessments of the cognitive component of occupational stress and the

influence of the technological production factors were found (at $p<0,05$). Chief operators feel the influence of social and psychological factors on their professional activities more than manipulator operators. Job satisfaction and the assessment of labor importance increase with the improvement of the operators` skills.

Table 1

Ergonomic Assessment of the Control Algorithms Complexity of Operators` Activities

Rolling Mill	N	N*l*	V*a*	K*ns*	K*nl*	C*v*	S*k*
Ukraine	166	76	3,9	0,4	0,2	0,16	0,25
China	246	92	5,8	0,4	0,2	0,12	0,30

Notation. N – the total number of algorithm parts; Nl – the number of logical conditions; Va – the tension of the algorithm realization (the number of operations per second); Kns i Knl – the standardized coefficients of stereotype and logical complexity of the operator`s activity; Cv – the coefficient of variation of movements per one rolling cycle; Sk – the coefficient of cognitive complexity of the algorithm.

In the analysis of the information exchange between operators and the rolling technological process, which was controlled by the complex of technical devices, it was discovered that the variation in the number of movements of the chief operators during one rolling cycle was 16% in Ukraine and 12% in China at relatively stable time of ingot rolling (the coefficient of variation was 2,8 % for the rolling mill in Ukraine, 3,5% and 5,2% for the mill in China). The variation for the manipulator operators are correspondingly 26% and 21%. A comparative analysis of the operators` load in the control of individual machines was carried out in order to identify the causes of stochastic activities. It turned out that the control of the main drive makes on average 37% of the chief operators` movements during one rolling cycle (5% in Ukraine and 39% in China). The control of the pressure device makes 26% of the movements (28% in Ukraine and 25% in China). The control of the front table makes 17% (20% in Ukraine and 14% in China) and the rear mill one makes 11% (10% in Ukraine and 12% in China).

The intensity of operator`s activity is characterized by the intensity indicators of control element movements (per second) and the variability of the movements for an ingot processing stage (as a percentage). Можливо передоf the movements for an ingot processing stage (as a percentage). It is possible to stipulate that a motor stereotype of operators is characterized by the movement intensity of the control elements, which is measured by the coefficient of variation. It makes sense to talk about an active “adaptation” of operators to the activity process. The received average indicators are given in the Table 2. The confirmation of the operators` active “adaptation” to their psychophysiological features is the increase of the variable component (by 6 times) of the ingot processing time and the number of movements (by 3 times) in the same pass.

Table 2

Movement Intensity of the Control Elements and the Operators` Movement Variability

Operators		Rolling Mill	
		China	Ukraine
Chief Operators	The movement intensity of the control elements, movement/second	2,9	2,7
	Movement variability, %	27,0	28,0
Manipulator Operators	The movement intensity of the control elements, movement/second	2,1	2,8
	Movement variability, %	23,0	27,0

The average coefficients of variation are given in the Table 3 as the tension indicators of psychophysiological and psychological functions of the rolling mill operators. The range of the variation coefficients from 10% to 20% corresponds to the average psychological tension. If it is more than 20%, the tension is high. If the range of the variation coefficients is less than 10%, the tension is low. The indicators, which characterize the intensity of heart rate (HR), tremor, concentration and attentional resource allocation, memory and thinking, are also given in the table.

The comparison of the HR intensity of the rolling mill operators in two countries showed that the occupational activities of the chief rolling mill operators from China were more intense than the ones of the chief operators from Ukraine. The requirements of the attentional resource allocation on a significant number of controlled mechanisms and the concentration of attention (which was increased by the attention slippage) are confirmed by the tension indicators of psychical functions.

Table 3

Variation Coefficients (%) of Psychical and Physiological Functions Indicators of the Rolling Mill Operators

Functions	Manipulator Operators		Chief Operators	
	Ukraine	China	Ukraine	China
Concentration of Attention	19,9±7,5	16,8±8,5	23,0±5,5	17,8±9,6
Attentional Resource Allocation	17,5±9,0	24,2±11,8	21,3±7,0	36,1±9,8
Memory	40,4±24,1	31,7±23,6	33,6±23,1	37,1±25,8
Thinking	12,5±7,2	12,5±8,5	12,9±4,9	14,1±7,0
Tremor	37,5±16,9	40,0±17,8	33,1±12,6	38,2±6,9
Heart Rate Intensity	6,9± 4,4	7,8±3,3	8,1±4,9	5,8±1,9

According to the Tables 3 and 4, the attention resource allocation of the Chinese operators prevails over their concentration of attention.

Table 4

Psychical Functions Indicators of the Rolling Mill Operators (M±m)

Functions	Manipulator Operators		Chief Operators	
	Ukraine	China	Ukraine	China
Concentration of Attention	11,4±0,1	11,2±0,2	11,2±0,2	21,5±0,2
Attentional Resource Allocation	11,6±2,0	13,1±2,1	13,1±2,1	13,9±1,6
Memory	5,0±1,0	4,1±0,9	4,1±0,9	4,8±0,6
Thinking	30,7±7,8	31,6±5,5	31,6±5,5	33,0±8,0
State Anxiety	41±4	40±2	40±2	35±7
Trait Anxiety	42±3	40±3	40±3	38±5
Age	31±5	32±6	32±6	35±3
Gender	10±2	11±3	11±3	11±2

But in Ukraine the concentration of attention of the rolling mill operators, who had to recognize a slippage of the rolls on the basis of visual information from the functional area, prevails over the distribution of attention. Thus, the control systems of rolling mill analogues are specific.

The psychological analysis of the operators'` activities is confirmed by the research results of short-term memory tension. Chief operators in China have to memorize 26 press round programs (14 ones in Ukraine), the implementation of which is carried out by the predetermined position of the rolls in each of the 14 spaces. And it leads to the tension of short –term memory. On the other hand, a more difficult calibration of the mill rolls in Ukraine (that contains 5 roll passes against 4 ones for a Chinese roll mill) leads to the increase of the manipulator operators` contribution to the realization of the press round programs, which put an ingot against one of the set roll passes. As a result, the memory tension of the Ukrainian manipulator operators dominates over the tension of this psychical function of the manipulator operators in China.

The psychological factors research has determined a negative impact of the following indicators on the characteristics of the operators` activities. They are: 1) a supply rhythm of ingots from the reheating furnaces; 2) a quality of their heating and a scale crust presence, 3) a timely removal of ingots from the heating area, work rhythm and accident-free operations. The analysis of the psychophysiological parameters of operators` activities allows to trace the dynamics of fatigue development as well as to establish a connection between the reality and mental health, which accompanies their activities. The Table 5 shows the operators` heart rate changes depending on the performed functions.

Table5

Rolling Mill Operator`s Heart Rate (M±m)

Heart Rate	Manipulator Operators		Chief Operators	
	Ukraine	China	Ukraine	China
After an hour of work	75,7±11,7	85,1±10,9	85,1±10,9	75,9±15,1
After an hour of rest	79,5±10,4	82,3±11,5	82,3±11,5	73,3± 15,5

According to the table we can see that the operators` transition to active actions on the control of the mill main drive leads to the increase in the heart rate on average by 5 %. A level of the heart rate at the end of the pause doesn`t apparently reflect a rest state but shows the measure of the preventive innervation which is expressed in the strengthening of physiological processes and thus promotes their course in the labor hours. The HR decrease of the Ukrainian manipulator operators (on average by 7 %) speaks about the monotonous nature of their work. The latest data are consistent with the stereotype indicators and logical complexity of algorithms, which are given in the Table 1 and confirm the validity of conclusions.

The transition from one press round program to another does not change the stereotype and rhythm of the operators` activities. This is due to the fact that the nature of the operations remains invariable and only their sequence changes. The psychophysiological functions confirm that a press round program change doesn`t affect the heart rate and tremor. Thus, a change of the rolling program doesn`t cause any tension emotions or maintenance level changes of the cardiovascular system of the operators.

The impact of the sudden changes in characteristics of the activity methods (rolling mill electric drive), the indicator of which is an increase in the heart rate, on the psychophysiological functions is more pronounced. It confirms the leading role of the activity methods as an ergonomic factor that affects on the functional state of the operators. This is especially true for the Ukrainian rolling mills due to a greater (in comparison with the Chinese mills) modernization of the activities nature of the chief operators during the changes in the workplaces. First of all, these changes concern an information aspect of the activities. A comparison of the algorithms complexity of the operators` activities shows that the complexity of the activity algorithms of the Ukrainian chief operators is 2.5 times more than the control algorithm variable of the similar properties for the manipulator operators. A comparison of these indicators gives the value of 1.5 for the Chinese mills. The subjective assessment of the cognitive component of the operators` occupational loading, which was made by the chief rolling mill operators in Ukraine, is on average 1.2 times higher than the assessment made by the manipulator operators. The HR dynamics of the chief operators confirms the reduction of the burden on the cardiovascular system while the performance of the manipulator operator`s duties.

The dynamics of the mental functions leads to the conclusion about the greatest stability of the attention resource allocation function and the short term memory one during a shift. The execution time of the black and red table test in most cases tends to decrease. We interpret this fact in the following way. The most important psychical function for work remains to ensure the optimum efficiency of the operator`s occupational activity, including due to the stress of the other body function systems. As a result of the analysis of labor efficiency by the criterion, which connects the productivity and energy consumption, all the examined rolling mill operators from Ukraine and China have been conditionally divided into three groups: 1) the most "successful" in the occupational activities; 2) the operators with an average "success"; 3) the " least successful" operators. The psychological indicator values differentiated according to the professional success of the chief operators are given in the Table 6.

Table 6

Operators` Condition in Groups with Different Professional Success (M±m)

Indicators	Professional Success Group		
	The 1st (the most successful)	The 2nd (an average success)	The 3rd (the least successful)
Age	45,5±7,0	42,0±5,2	36,5±10,5
Length of Service	18,0±9,5	15,5±7,5	12,5±10,0
State Anxiety	43,0±0,5	35,5±7,5	39,5±2,5
Trait Anxiety	42,5±6,5	38,5±5,5	37,5±8,5
Heart Rate	95,5±15,5	82,5±8,5	85,5±15,3
Expert Assessment	89,0±2,5	95,5±3,5	75,3±5,0
Social and Labor Activity	14,5±3,5	15,5±2,5	12,5±2,3
Job Satisfaction	75,3±15,8	75,5±17,4	55,5±15,1
Occupational Loading	65,6±5,2	63,6±4,7	64,5±4,5
Labor Importance	85,8±5,7	75,0±9,5	83,2±4,3

It was found that the most "successful" operators had the highest social and labor activity with a high index of satisfaction with their job. The operators from the third group of professional success are characterized by low social and labor activity. They estimate inadequately their occupational loading and underestimate the influence of the organizational factors of metallurgical production.

The level of claims is reflected in the assessment of the labor importance. It is also revealed in the reduction of satisfaction of the operators from this group with their own activities in the conditions of a low objective estimation of the labor results. We found an increase of the anxiety level among the "most successful" and the "least successful" operators.

It can be explained as follows: the anxiety level of the first group operators increases due to the mobilization of the activities and the anxiety level of the third group operators increases because of the non-optimality of the activities, inadequate self-esteem and lack of the occupational adaptation. We have established a satisfactory validity for the most used methods (not lower than 0.7). We cannot ignore a person`s attitude to the activity in the study of psychological factors of the rolling mill operators` activities. It is also impossible to solve any optimization problems of the operators` activities excluding these factors.

The color-association method usage allowed revealing deep and extramental interaction components in a number of important factors and at the same time passing the protective mechanisms of the verbal system of consciousness.

Thus, having limited the own research sphere of emotional aspects by the psychological analysis frameworks of the operators` professional activities and mental processes and states, which accompany these activities, we consider emotions on the one hand as an indicator of the operator`s functional condition in the activity and on the other hand as an indicator of the specialist`s attitude to his job and a set of production factors.

A set of colored stimulus- response reactions of the Lusher`s test, which were presented by eight cards, was used as the research device.

The tasks of the color-association research were formulated as follows:

1) to analyze the possibilities of psychological diagnostics of the operator`s functional condition in the activity and his correlation with professional success by means of the Lusher test (the basis for the analysis is the premise of the psychological theory of activity about the reflection of the individual states in emotions);

2) to consider the possibilities of the color-association method usage for the diagnostics of the operators` attitudes to their activities and the manufacturing and technological environment (the basis is the premise of the psychological theory of activity about the reflection of the person`s states and his attitude to the world and own activities in emotions);

3) to consider the possibilities of the color-association method usage for the diagnostics of the interpersonal relations of the operators and to analyze their influence on the teamwork efficiency (the basis for the analysis is the premise of the psychological theory of activity about the reflection of the attitude of one person to another in emotions).

The solving of the first task is connected with a traditional usage of the Lusher test. A frequent repetition of the each operator testing during a shift allowed revealing the changes dynamics of the emotional states.

Compliance between all the mental properties and indicators was traced in the quantitative interpretation of the Lusher test. At the same time heteronomy and autonomy indicators of the Lusher test correspond to the mood swing indicators and the emotional stability ones as well as the indicators of eccentricity and concentricity correspond to the excentrality and internality. Shiposh vegetative coefficient and a method of measuring the

size of the color elections deviation from the “Autogenic norm” (AT-norms) were used. The size of the total deviation from the AT-norm is connected with the rigidity of requirements which is moved forward to a work performer by the specificity of the profession [6].

The second task that has been solved due to the Lusher test in connected closely with the functional state diagnostics. But in addition to the above an emphasis on the reflection of the subject`s attitude toward reality in emotions, which characterize the human condition is dominate. Thus, we proceeded from the assumption , according to which the human condition that is formed and shown in his activity is associated with an indicator of adaptation in the production process and also is the function of the specialist`s attitude to his occupational activity.

During the study process of the operators` attitude character to their activities, the operators were offered to grade an eight color card in reference to the concept “what is emotionally considerable for a specialist operator”. The question was as follows: “What is the color of your work?” It was provided that human disadaptation in the conditions of the professional environment is shown in a mismatch of the “personal” card components of the Lusher test as the characteristics of the operator`s functional state and the eight color card, which is associated with the subject`s attitude to his own activity[7].

The quantitative mismatch is defined as a difference of the corresponding interpretative coefficients which were calculated for the both cards. The mismatch is psychologically interpreted as a measure of deviation of the specialist`s personal characteristics from the emotional and conceptual image of the production environment and operator`s own activities in it.

The third task that was solved due to the color association method is connected with a necessity to analyze the influence of the operators` interpersonal relationships, which are formed in the course of their professional engagement, on the labor efficiency and functional state. The traditional sociometric research methods of interpersonal relationships in small groups are ineffective. The usage of the sociometric assessments on the basis of a partner choice is shoved against the “psychological barrier” at the rolling mill operators. We explain it by the specificity of the studied contingent and activity features: constant contingent of rolling mill operators 9about 30-40 people) because of the high complexity of the activities; long-term collaboration; clear system of the internal hierarchy; segregation of the operators` duties, which is as close as possible to the functional segregation; limited communication by the teamwork conditions.

There are three variants of the operators` answers in the sociometric surveys, which were conducted in a verbal form: positive attitude to the all colleagues that is not differentiated; positive attitude to the members of the own control post and refusal to assess own attitude; evasion of the attitude assessment to the colleagues. However, a negative attitude to the teamwork with some operators because of personal reasons was noted in private conversations.

Thus, the task solution of the collectives forming according to the conditions of not only the highest teamwork efficiency, but also a positive emotional background of interpersonal relationships is one of the necessary conditions of the operator`s activity optimization.

The usage of the color association method for the solution of the pointed task is based on the provision that people associate the colors naturally and statistically significantly with their emotional and personal characteristics. The emotional characteristics, which were defined by the Lusher test, are connected with deep attitudes of the person that are significant for the interpersonal interaction process of the collective subject of activity. The analysis of the comparison of production efficiency of the operators` activities and their professional characteristics leads to the conclusion about an influence of motivational aspects and personal factors on the workers` professional success.

It was found that the operators` "eccentricity", "autonomy" and "working capacity" decrease in the course of the deterioration of their professional success, reduction of the social and labor activity and a positive expert evaluation of their work by the management. At the same time the indicators of "concentricity", "heteronomy" and "stress" grow; and the attitude to the activities worsens.

The interpretation of the test results leads to a conclusion that the most successful operators in their professional attitudes are characterized by an active orientation on the professional environment in terms of the impact on it as well as by the high self-control, independence and person`s balance, and lack of the person`s retardation.

The third (worst) group of operators is characterized by the increased dependence on the environment, sensitivity to the effects of it and passivity, by the propensity for the defensive reactions, external accusatorial direction in reactions to frustration and personal contradictions. The second group of operators is intermediate according to the production indicators and the "personal" ones. The analysis of the color –association test results showed the smallest two color card divergence in the indicators of "eccentricity" and "personality balance" in the most successful group and in the indicators of "anatomy" in the second and the third groups of the operators.

The "most successful" specialists-operators have the slightest deviation from the "Autogenic norm" as well as the smallest deviation of the coefficients in the Lusher test "personal" card. In general, a tendency of the value approximation of the color row interpretative coefficients to the corresponding indicators of the Lusher "personal" card, which are distinctive for the successful operators, is observed for the operators of the worst professional success group. The adequate to the production environment operators` "understanding" of the necessary personal qualities causing the efficiency of activities is reflected in it. At the same time a tendency to the unproductive decrease of the "eccentricity" indicator in the color-association test in comparison with the similar indicator of the Lusher test is noted for the "unsuccessful" operators.

The low "concentricity" indicator of the third group specialists (in comparison with the ones from the first group) as well as the labor efficiency underestimation of this indicator is interpreted as a reduction of the creative activity in this group of operators, an absence of the expressed addiction to the environment (working conditions) changes according to the specific features and requirements. The low level of these operators` social and labor activities and the low operators` assessment of the organizational ergonomic factors influence on the occupational loading can provide an "optimizing" effect in conditions of the active realization of their personal positions in the collective.

Conclusions.

A comparison of the labor efficiency of the rolling mill operators and their psychological characteristics leads to the conclusion about the existence of a nonrandom influence of the motivational aspects and personal factors on the personnel professional "success". An ergonomic assessment of the operator`s activities proved that the rolling mills modernization requires the consideration of psychological factors (difficulty and intensity of activities, functional states of specialists) in the development of technological modes (press round programs) and in the creation of local and integrated automation systems, in the improving process of the organizational and information support for the operator`s activity during the exploitation of the socio-technical system. The level of metallurgical production organization is shown in such indicators of the functioning of rolling mills as efficiency, rhythm, continuity and capacity and has an impact on the social and psychological status of a specialist, psychological climate in the collective and job satisfaction. The subjective qualities of operators (social and labor activity, job satisfaction and labor importance) influence on the success of the professional activities and functional states. In such a case, the motivation level, attitudes to the activities and social and labor activity have a great importance. It is necessary to take into account not only technical factors, but also psychological features of the specialists in the selection and arrangement of the rolling mill operators personnel of new generations in both countries. In China the problem of selection and arrangement of specialists-operators should be considered on the aspect of providing psychological aid to conscientious workers in the usage of their own psychological resources with maximum efficiency due to the existed in China national adjustments for the provision of personal labor efficiency. In Ukraine the requirement of the unconscionable workers identification is added to this aspect of the problem as well as the incompetent workers identification. The research methodical complex of the professionally important operators` psychological qualities (occupational attention, short term memory and thinking) can be used for the professional selection of operators and their further vocational training. The prospects of similar ergonomic studies are seen in the creation of the psychological and ergonomic theory of a functioning intensification of the metallurgical production high-automated processing, which can be a competitive advantage in terms of socio-economic crisis.

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METHODOLOGICAL APPROACHES TO FORMING PROFESSIONAL COMPETENCE OF FUTURE ECONOMIC SAFETY MANAGERS

Abstract. *The modern scientific and methodical approaches to the study and analysis of professional competence that are in line with the state requirements for reforming education and the tendencies of introducing a competent approach as one of the key factors of today's vocational education are analyzed. A number of methodological approaches have been identified such as: person-oriented, systemic, axiological, modular, competence, technological, contextual and active-productive, and their influence on the formation of professional competence of the manager of economic security. The emphasis is placed on the fact that the formation of the professional competence of future managers in the field of economic security should provide a thorough analysis of professional problems regarding the security of economic activity of enterprises and organizations. Implementation of the competence approach should include the use of professional training of real professional tasks with the orientation of future professionals to analyse the results of their own professional activities and decisions. The basic principles of professional training of future managers of economic security are determined. It has been established that the professional training of future managers of economic security should be carried out on a modular basis.*

Introduction

Modern education is aimed at providing fundamental scientific, general cultural, practical training of specialists, who must determine the pace and level of scientific and technical, economic and socio-cultural progress, the formation of the intellectual potential of the nation for the comprehensive development of the individual as the highest value of society. It must become a powerful factor in the development of the spiritual (mental) culture of the Ukrainian people, the reproduction of the productive forces of Ukraine.

The main tasks of institutions of higher education are:

– conducting educational activities, which includes educational, scientific, cultural, methodical activities;

– providing the conditions for mastering the system of knowledge about a human being, nature and society; the formation of a socially mature, creative person; education of a morally, mentally and physically healthy generation of citizens; the formation of a civic position, patriotism, self-esteem, readiness for work, responsibility for their destiny, the fate of society, state and humanity; ensuring high ethical standards, the atmosphere of

benevolence and mutual respect in the relations between workers, scientific and pedagogical workers and applicants of higher education;

– preparation for professional activity;

– conductind scientific research or creative activity as the basis for the training of a future specialists and scientific, technical and cultural development of the state;

– familiarization with the requirements and needs of the employment market;

The modern educational system in Ukraine is in a state that does not meet the requirements that arise in the conditions of the development of Ukrainian statehood, the transition to a market economy.

1. Justification of the structure of personality-oriented approach in the formation of professional competence of future economic security managers

The main purpose of the program «Education» («Ukraine XXI century») - definition of strategy of education development in Ukraine in the coming years and the future of the XXI century, creation of a viable system of continuous education and upbringing for the achievement of high educational levels, providing opportunities for constant spiritual self-improvement of the individual, the formation of intellectual and cultural potential as the highest value of the nation.

The strategic tasks of education are:

– transition to a flexible, dynamic, step-by-step system of training specialists, which will enable to meet the needs and opportunities of an individual in obtaining a certain degree of education in the desired direction in accordance with its abilities;

– formation of a network of higher education institutions , which according to educational levels, forms and terms of study, sources of funding would satisfy the interests of the individual and the needs of each region and the state as a whole;

– Presentation the education of Ukraine on the level of achievements of developed countries of the world and its integration into international scientific and educational co-authorship.

Priority directions of educational reform:

– prognostication the needs of the state, regions, branches of the state system of selection and training of talented youth, development and implementation of mechanisms of its state support;

– optimization of the network of institutions of higher education and their structure, organizational and structural changes in the system of education, aimed at the development of institutions of higher education of different types, increasing the role and significance in implementing the strategic goals of education;

– development of new models of different levels of higher education; definition of its state component; broad integration into the international education system;

– updating the contents of education, introducing effective pedagogical technologies; creation of a new system of methodical and informational support;

– the entry of Ukraine into the transcontinental computer information system;

– organization of training as a continuous scientific and production activity with the fullest use of scientific and production potential of institutions of higher education.

According to the results of the survey of leading experts in the field of economic security management and owners of organizations, firms and enterprises, the following problems regarding the compliance of the competence of managers with economic safety to modern working conditions are identified, first of all, not enough:

– professional activity in identifying the factors of economic risks and safety of objects of entrepreneurial activity: buildings, structures, machines, mechanisms, commodity stocks, raw materials, financial resources;

– provision of information security (protection of information networks, resources, software, as well as intellectual property and other intangible assets, including property interests of entrepreneurs);

– possession of normative and legal documents (professional and correct registration of rights, order and conditions of the activity);

– self-designing of forecasting plans for the prevention of economic risks;

– conducting searches in accordance with the profile of professional activity, etc. [4; 5].

It should be emphasized that modern professional activity requires competent specialists capable of operational applying the acquired knowledge, skills and abilities in real conditions of work in accordance with modern socioeconomic changes and needs. The development of motivation, professional activity and autonomy in mastering the chosen profession and a certain type of activity, determining their own personal meanings, forming on this basis certain personal settings for professional cooperation in the implementation of specific actions and functions has a particular importance in the training of future specialists.

Basic principles of professional training of future managers for economic security:

– humanism, subjectivity and tolerance;

– availability;

– professional cooperation;

– prognosticity;

– orientation to the individuality and creative potential of future masters in economic security;

– practical orientation of all stages of preparation.

It is the practical training of future managers in the field of economic security, we consider as an integral part of the educational process, which is one of the priority structural

forms of educational activities and acts as an effective means of shaping the appropriate level of professional competence among future specialists. Future specialists during their practice have to get the skills to solve their professional problems individually, which is the basis for the formation of professional independence, namely:

– any kind of practice includes an element of independent professional activity;

– diverse independent work, organized in practice, provides the highest level of mastering the theoretical material;

– only in the process of self-performed work and, first of all, specific tasks of practical orientation, there are formed beliefs about the importance of the level of formation of professional competence in their own professional activities;

– independent work which becomes an independent professional practice, forms such professional qualities as purposefulness, persistence, initiative, creativity, independence.

It should be noted that the manager of economic security must possess the non-standard thinking, ability to understand modern professional tendencies in solving complex problems and tasks, to demonstrate initiative, independence, creativity and creativity in making professional decisions, constantly improving the level of own professional training.

The professional training of future managers in the field of economic security should include application of personality-oriented, systemic, axiological, modular, competence, technological, contextual and activity-oriented approaches with a combination of competence-oriented theoretical training, organization in the conditions of real objects of economic management of appropriate practical training, forming on this basis key competencies in accordance with real professional actions and functions. The basis of such training should be personal-oriented vocational training, which involves competency-oriented search activity with simulation in the educational process of real working conditions.

Personally - oriented approach - this is a study of learning, which firstly places the identity of the learner, his self-worth, the subjectivity of the learning process. Personally-oriented learning is not merely the consideration of the particulars of the subject of learning, it is another methodology for organizing learning conditions, which involves not "accounting", but "inclusion" of its own-personality functions or the use of its subjective experience .

Personally - oriented approach involves the orientation of the educational process on the person as the target, subject, result and the main criteria of its effectiveness, which determines the recognition of individuality of the individual on the basis of the humanistic paradigm. Personality approach in the broad sense of the word implies that all mental processes, properties and conditions are considered to be appropriate to a particular person, that they are "derivatives that depend on the individual and social being of man and determined by its laws" [7].

It should be noted that scientists distinguish between different groups of concepts related to the development of personality. The first group of concepts (sociodynamic - by definition, O. Podlynyayev) [8] is based on recognition of the leading role in the formation of the individual external influences of the social environment and education. A man, according to these concepts, is initially a "blank sheet", and in the process of education one can form a person with the given characteristics on the basis of a rational combination of positive and negative stimulies. The second group of concepts (psychodynamic), the basis and determining force of personality development determine heredity, innate instincts and biological programs of man. The third group of concepts (subject-dynamic) argues that the human person - a unique integrity [9]. All people are initially good and just, active in the pursuit of self-improvement, and the main role of education - to create conditions for the realization of this potential for self-development of the individual.

O. Podlynyayev proposed the classification of all existing concepts of personality [8]. In his understanding, most authors of the concepts of personality are united in the fact that its structure form three main components. They are called by each author in different ways, but, in essence, the first component determines what in the individual was formed as a result of the influence of the environment, education; the second one is that which arose as a result of one's own efforts, as a fruit of one's own will and a person's character; the third is what is congenital, given to a person initially, that is, biological programs, instincts, heredity.

Functions of personality-oriented education:

– humanitarian, the essence of which is the recognition of human self-worth and the provision of its physical and moral health, awareness of the meaning of life and active position in it, personal freedom and the possibility of maximizing the realization of its own potential. Means (mechanisms) for the implementation of this function are understanding, communication and cooperation;

– culture-oriented, aimed at preservation, transmission, reproduction and development of culture by means of education. Mechanisms for the implementation of this function are cultural identification as the establishment of a spiritual relationship between man and his people, the adoption of his values as his own and the construction of their own lives with their consideration;

– socialization, which involves the assimilation and reproduction by the individual of social experience, necessary and sufficient for the person to enter a society. The mechanism of the implementation of this function is the reflection, the preservation of individuality, creativity as a personal position in any activity and means of self-determination.

The realization of these functions can not be carried out under the conditions of the command-administrative, authoritarian style of teacher-student relations. In personally-oriented education, another position of the teacher is foreseen:

– an optimistic approach to the student, his future, the teacher's desire to see the prospects of developing the student's personal potential, the ability to maximally stimulate his development;

– attitude towards the student as a subject of his / her own educational activity, as a person capable of learning not from coercion, but voluntarily, on his / her own will and choice, showing his / her own activity;

– relying on the personal meaning and interests (cognitive and social) of each student in the study, promotion of their acquisition and development.

The content of person-oriented education is aimed at helping a person to build his own personality, to define his own personal position in life: to choose meaningful for himself values, to master a certain system of knowledge, to identify a range of interesting scientific and vital problems, to master the ways of their solution, to open reflexive the world of our own "I" and learn to manage it.

The purpose of personally-oriented education is to use mechanisms for self-realization, self-development, adaptation, self-regulation, self-defense, self-education and other factors necessary for the formation of a distinctive personal image in one or another field of activity.

So, the criteria for the effective organization of person-oriented learning are the parameters of personal development. The application of a personally oriented approach in vocational education ensures, first of all, the formation of those qualities of the individual, which will help the future specialist to adapt effectively to the modern socio-economic conditions of activity, to take an active position in it on the basis of conscious deliberate professional self-development and self-improvement.

Scientists have established that the personal approach in the training of managers is based on the assumption that effective management activities are associated with the possession of a multitude of personality traits, which, for example, from the point of view of supporters of biologizing concepts, can be given genetically. Numerous attempts have been made to determine the dependence of management effectiveness on the severity of individual personality traits or their ensemble, the style of management activity and standards of conduct. A number of studies aimed at establishing a link between the performance of a specialist and his intellectual performance. At the same time, most researchers derive from the understanding of intelligence as a collection of all cognitive functions of man. There is reason to believe that an effective manager has intellectual abilities. In addition, there is a relationship between the effectiveness of management and such intellectual characteristics as the flexibility of thinking, the ability to quickly and accurately solve specific professional tasks.

A number of works point to the need to have a manager with developed creative abilities [10]. Also, there are correlations between the effectiveness of management and communicative characteristics - sociability, level of empathy. Much attention is paid to the

manager's ability to achieve achievement, predisposition to risk, ability to stay in a situation of uncertainty, stress and responsibility for a long time [11].

According to the results of many studies, the existence of a relationship between the success of a manager and a set of his personality traits is confirmed. So, R. Stogdill writes about the relationship between the manager's effective work with intelligence, education, reliability, responsibility, participation in public life and socio-economic status. From the point of G. Kunz and S. O'Donnell, a successful leader must have expressed mental skills, the ability to logical analysis, have a desire to control, be sociable and honest [12].

It`s important to say that in professional pedagogy, the scientific understanding of a personality is based on the definition of the essence of a man as a set of socio-economic relations. Moreover, the person was considered as the subject of directed formation, and the problems of personality formation within the educational process are solved through the disclosure of mechanisms and opportunities for purposeful management of this process. The perception of the characteristics of the individual, caused by the idea of human activity in activities and relationships, created the preconditions for science to understand that personality is a phenomenon of subjectivity in the context of social and economic relations. This led to a change in the paradigm of vocational education and reflected in the essence, principles and technologies of personally-oriented and professional training on the professionalization and socialization of the individual as a form of manifestation of the dialectical unity of the general and individual-special and taking into account the peculiarities of the mechanisms for the implementation of one or another type of professional activity.

The application of a personally-oriented approach in shaping of the professional competence of future managers in economic security in the context of modern management should be oriented towards the individual, his individual style and the performance of a particular person. A modern manager should be able to motivate effectively the staff of the organization based on an individual, differentiated approach to each employee.

It should be noted that the personally-oriented approach involves the use of situational tasks and exercises on the reproduction of the influence of future professionals personal qualities on the effectiveness of professional activities. In the preparation of the future manager, enriching to a certain extent the idea of professionally significant qualities of the manager's personality can ensure the effective management of the group and specific professional situations. Situational tasks should set tight boundaries for managers, envisaging the reproduction of samples of behaviour of specialists prone to algorithmization, action on samples, which confirms the main value of situational exercises, which, in essence, create conditions for a realistic perception of professional activity. At the same time under the situation understood the complex of objective conditions, interpersonal relations in the group, the states of objects of management, which by virtue of their dynamics require from the successful leader of the manifestation of its features. One

situation may require the leader to display softness and sensitivity, the other one - patience and rigidity, extreme caution and the implementation of decisive and risky actions. Scientists have identified additional factors that affect the performance of the manager. In particular, it is argued that successful leadership depends on: expectations and needs of managers; the structure of the group and the specifics of the situation in which it is located, the cultural environment in which the group is included; the history of the organization in which the professional activity is carried out; the age and experience of the manager, his seniority in a particular position; the psychological climate in the group, its size and level of development; personal qualities of subordinates; conditions of decision making; the degree of matching this group with the style and personality characteristics of the manager.

Situational tasks, highlighting a number of features of the manager's personality, remain its inherent characteristic, confirming the manager's readiness for productive activities in a wide range of situations. These characteristics, in particular, include the ability to flexibly change leadership style, resistance to uncertainty, and lack of hard stereotypes.The influence of all the approaches presented to the formation of requirements for the manager's personality is seen in models adopted in different types of management cultures, where the content of the requirements to the characteristics of the manager reflects the functional and value structure of his activities, requirements for personal characteristics, leadership style and range of specific for the professional environment of situations.

The foregoing, one can argue that the formation of the professional competence of future managers in the field of economic security in the process of professional training should foresee the use of situational tasks for the effective resolution of future professionals by real professional situations and problems.

2. Characteristics of the systemic, axiological, modular, competence, technological, contextual and performance-oriented approaches used to form the professional competence of future managers in economic security.

The system approach in the studying of pedagogical systems is based on the disclosure of the integrity of the object, the identification of its relationships. Five main characteristics can be distinguished in the concept of the system: structural, the existence of interconnections, integrity, interaction with the environment, the target nature. Under the system approach, this is the principle of cognition and social, pedagogical and professional practice, which consists in the need to research, study, design objects as some systems [13].

The axiological approach is based on humanistic pedagogy, where man is seen as the highest value of society. It is the basis of modern philosophy of education and methodology of modern pedagogy. Axiological approach in the study of pedagogical phenomena and problems involves the study of relevant values, their classification and the role of self-development of man. It is based on the understanding of the social nature of values, the reflection of the semiotic issues from the standpoint of positive and creative values, the

influence of the qualitative choice of values on the formation of the values of the personality, on the development of his spiritual, moral and creative potential, on the value of the individual in all spheres of his life [14].

Modular approach. The essence of the modular approach to vocational training is that the study of a discipline can be carried out independently in accordance with the curriculum, which includes modules in the form of target blocks of educational information aimed at mastering certain professional actions or functions. A modular organization of training creates conditions for the implementation of a targeted individualized program, provided that the learning material is acquired consciously when it becomes the subject of systematic, active action of the learner. Moreover, in the training of future managers, the teacher, while developing the training tasks, must provide with motivation, self-control, self-evaluation, ensuring the reflexivity and professional orientation of the educational process. In modular training, these tasks are implemented through the differentiation and professionalization of content, as well as the organization of various forms of vocational training.

Modular instruction is characterized by the clearity and logical actions, the activity and student independence, the individualized pace of work, the possibility of system control of the results of their own activities. The development of modules in the training of future managers should includes the following principles:

– didactic aims of educational elements in their totality should ensure the achievement of the integrated goal of the module;

– functional professional orientation, accessibility, specificity and completeness of the educational material;

– observance of the logical learning by students` knowledge: perception, comprehension, memorization, application, generalization and systematization

– the structure of the module should correspond to the logic of class occupations of one type or another and the logic of mastering certain professional actions and functions.

The main task of the teacher is the development of a modular program, based on a training module, which includes the complete block of information, the target program of the learn` action; certain tips, teacher's recommendations for the successful implementation of the module program. In our opinion, the professional training of future managers in the field of economic security should be carried out on a modular basis, where the module should be understood as such volume of educational material, which ensures the mastery of future specialists in specific competencies for the implementation of a particular type of functional activity.

The context approach is based on the theory of contextual learning by A. Verbitsky, which involves organizing a learning process with a consistent modelling of future professional activities, including basic job functions and real professional situations [15].

According to the concept of contextual training, the training of a future specialist requires modeling the content and features of future professional activities. Reproduction in the educational process of professional activity provides the opportunity for the future manager to understand and master the specific professional activities and functions, mastering the ways of their regulation. In the professional training of future managers, the main unit of the content of training in the context of the chosen professional career is the professional situation. The organization of contextual education involves mastering all types of professional activity in its subject and social aspects. A model of the integral content of professional actions and functions of future specialists on the basis of context-based learning is ensured by the application of appropriate forms and methods of training in solving professional problems, tasks and functions that reproduce real professional problems and tasks. Forms and methods of contextual education ("brainstorming", analysis of professional situations, role play, business game, educational design, etc.) are aimed at modeling the subject and social content of the future specialist.

Technological approach is considered as a sound system of activity, used to transform the environment, the production of material or spiritual values. The application of this approach provides the direction of the learning process to consistently mastering professional activities and functions, providing for the application of appropriate forms and methods of vocational training. Technological approach contributes to:

– Predictability of results of activities;

– analysis and systematization of experience;

– complex solution of problems;

– creation of favourable conditions for effective work;

– development of effective pedagogical models [13].

It should be noted that the formation and development of teaching technologies is presented by scientists as a complex integration process that includes people, procedures, ideas, tools and organizations that are designed to analyze problems, make recommendations, implement, evaluate and manage solutions to problems that affect all aspects educational process [16].

While organizing the learning process from the point of view of its technology, participants are provided with the process of learning certain actions, which will solve a specific task or one or another task set with the implementation of specific goals and motives. The technological approach to the organization of the educational process involves a consistent interconnected system of teacher actions aimed at solving the teaching tasks, or systematic and consistent implementation in practice of a pre-designed pedagogical process. Moreover, technology of training is considered as a result, the exact reproduction of which guarantees the success of pedagogical actions.

It is possible to outline the following basic scientific provisions of the technological approach in shaping the professional competence of future managers of economic security:

– the effectiveness of the educational process, its compliance with the defined requirements and needs;

– professional orientation towards specific professional actions and functions;

– ensuring integrity, consistency and professional logic of actions and functions of future specialists in the implementation of certain types of activities;

– structuring of the educational-cognitive process in order to ensure the functional activity of future specialists.

In the system of vocational education, *the competence approach* is increasingly seen as a technology for modelling the results of education and providing a certain quality of vocational education in the form of competences and competences. The orientation of education is directed at such goals as learning, self-determination, self-actualization, socialization and development of the individuality of future specialists. The main result of professional training of managers at the present stage is the general and professional competence of the future manager, is considered as a combination of scientific and professional knowledge and skills, creative abilities, independence, adequate self-esteem, humanistic values orientations, emotional-volitional regulation and behavioral manifestations of personality.

Being an active factor in the person's activity and behavior, the professional competence of the subject is characterized by mobilization readiness for its implementation in any situation.

Competent approach to learning is the way that will give the opportunity to bring the educational system to a qualitatively new level. Under the competence approach is understood as "a set of general principles for defining the goals of education, selecting the content of education, organizing the educational process and assessing educational outcomes" [17].

The level of education from the standpoint of competence approach is distinguished by ensuring the ability to effective adaptation in real conditions of activity, readiness to independently solve professional problems of varying complexity. The essence of this approach is that this approach focuses not only on the assimilation of knowledge, but also on the way of their assimilation, on the images of thinking and activity, on active learning and cognitive activity, the development of cognitive forces and the creative potential of future specialists.

To determine the essence of the competence approach in education we should turn to the concept of "competence". Translated from Latin, this word means a range of issues in which a person is well-informed, has knowledge and experience.

Khutorsky emphasizes that a person who is competent in a certain field possesses the relevant knowledge and ability to take effective action in this field [17]. In the opinion of V. Bolotov, the competence approach is realized as a generalized condition of the ability of a person to act effectively outside the classical scenarios and classical situations [18].

According to Khutorsky's definition, competence is the readiness of a person to mobilize knowledge, skills and external resources for effective activity in a particular life situation. The competence as a set of personal qualities of a student (value orientations, knowledge, skills, abilities, abilities), is the ability to work in a certain person-significant area [17].

The orientation of the educational process to the formation of professional competence serves today as the main goal of higher education and penetrates all the documents defining its development. The analysis of numerous publications shows that the competence approach is an attempt to bring vocational education and the needs of the labor market on the part of employers into the matching of the training of competent specialists.

From the standpoint of a competent approach, the level of education in modern conditions is determined not so much by the amount of knowledge, their encyclopedicity, but the ability to solve professional problems and problems of varying complexity on the basis of available knowledge.

It is worth noting that the term "competence" is used in the educational space of Europe to indicate the level of professional qualifications of graduates of higher educational establishments [19].

The basic principles of a competent approach are: development of key, basic competences for prompt response to changes in the labour market; continuity of vocational education; the transition from the subject teaching to the interdisciplinary module with competency training that provides the flexibility of vocational education.

Competent approach involves systemic transformation of professional training, which is based on the idea of professional orientation of the educational process, the unity of its target and content components in the direction of the final result of training - the formation of professional competence of the future specialist.

According to A. Khutorsky, the concept of educational competence includes a set of semantic orientations, knowledge, skills, experience of personality. And their introduction into the practice of training will just solve the typical problem of the implementation of the acquired theoretical knowledge in solving specific problems or problem situations. Educational competence involves mastering a comprehensive procedure in which for each selected direction a corresponding set of educational components is determined [17].

The level of human education, in the context of the implementation of the competence approach, is determined by the ability to act in a situation of uncertainty, and to assess the achieved level, you can specify the following characteristics: scope; the degree of uncertainty of the situation; possibility of choosing the mode of action and its justification. The ability to solve problems is characterized by such components as: motives of activity; ability to navigate in sources of information; skills required for certain types of activities; Theoretical and applied knowledge, providing understanding of the essence of the problem and the optimal choice of ways to solve it.

It should be noticed that the competence approach requires a rethinking of the goals and objectives of vocational training, the substantiation of competence-oriented forms and methods of training, proposes certain requirements for methods, methods for organizing the control system in the educational process of the levels of formation of professional competences, depending on the peculiarities of professional activity of specialists and is the basis for shaping the professional competence of future specialists in one or another field of activity.

Scientists emphasize that modern professional training should be oriented towards the formation of a value relation both to a person and to his activity. This, in turn, makes it necessary to study the conditions of development of individuality, mechanisms of effectiveness, self-realization, self-development, self-regulation, adaptation of man to real working conditions.

Activity-productive approach is the methodological basis of vocational education of a new generation. Under the activity-effective approach is understood an active way of organizing educational and cognitive activities of students, when the professional training of future specialists is carried out on the basis of close relationship theory and practice, provided the orientation of the educational process to the practical application of acquired knowledge in the implementation of certain types of functional activity with obtaining specific results own work. Activity-productive approach involves professional cooperation, the choice of professionally-oriented goals and motives, planning of activities, its organization, independent assessment of the results of their own work.

Conclusions.

The implementation of the competence approach should provide with the use of professional training of real professional tasks, provided that the source data is multivariable and how to solve the tasks, with the orientation of future managers to analyze the results of their own professional actions and decisions. Moreover, the complex-oriented training of future managers in the field of economic security should be carried out with the use of problem-based, project-based learning based on the formation of critical thinking and the ability to solve real professional problems independently. The application of a personal approach in shaping the professional competence of future managers in economic security should include:

– inclusion of the value-motivational component in the content of vocational training;

– formation of key personal competencies and professionally relevant characteristics of future specialists;

– modelling of real professional situations, which determine the need for personal experience in professional behaviour and the way of implementing real professional activities and functions.

Thus, the professional training of modern managers in economic security should ensure the formation of a competent person capable of effective activity in modern socio-economic conditions. Moreover, the competence-oriented training of future managers of the security of economic security should be carried out on the principles of observance of systematic and humanistic principles with the formation of critical thinking and the ability to independently solve real professional situations and problems. Competent training from the point of view of a competent approach should envisage mastering of the structure of professional activity, first of all, the development and implementation of competency-oriented forms and methods of vocational training in mastering the system of competencies necessary for successful professional activities.

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ORGANIZATION OF EDUCATIONAL PROCESS WITH USAGE OF ELECTRONIC EDUCATIONAL AND METHODICAL COMPLEXES FOR UNSUPERVISED WORK OF STUDENTS

Abstract. *The possibilities of using information and communication technologies in the educational process of a higher educational institution are investigated, the functions and structure of electronic educational and methodical complexes are determined, their advantages and disadvantages are analyzed in comparison with paper carriers of information. The ways of use of electronic educational-methodical complexes for the purpose of organization of independent work of students, improvement of quality of their training at the medical university are offered. Features of formation of professional self-consciousness of future doctors are considered in the process of their preparation in medical higher educational institution, the results of experimental verification of their effectiveness are analyzed. Based on the analysis of psychological and pedagogical sources that affect the professional self-awareness of future doctors in the process of their education in higher education. The general tendency of development of representations of future medical workers about a profession is revealed. The content of the methodology of psychological and pedagogical support for the development of personal maturity of students of medical universities is revealed. The analysis of the results obtained using the method of unfinished sentences helped to reveal not only the students' perceptions of their professional future.*

Introduction.

The most characteristic sign of the current stage of development of education is the intensive introduction of information and communication technologies into the educational process (ICT), computerization and informatization of education, formation of a single information educational environment of educational institutions, which is understood by specialists as didactic, psycho-pedagogical, communicative, material and technical support of the educational process (Bashynska, 2003). Applying of ICT in the educational process of higher education institutions (HEI) allows to individualize and differentiate the educational process of higher educational institutions (Larionov & Pisarenko, 2005), to increase the leval of the knowledge, skills and abilities of students because of the positive influence of ICT tools (Hurevych, Zhylina & Kademiia, 2006). This provision includes ICT-based learning tools; educational and scientific information that promotes the formation of professionally significant and socially important qualities of the personality of the future specialist, – information, such as that included in the official order and fixed in the form of training programs, as well as additional educational information (Polat, Buharkina, Moiseeva, and Petrov, 2008).

One of the means of formation of the informational educational environment in higher educational institutions, in particular, medical university is the creation of electronic educational and methodological complexes of all disciplines are being studied. In recent years, the issue of the implantation of ICT in the educational process has been intensively investigated in Ukraine (M.I. Zhaldak, I.E. Zakharova, M.Iu. Kademiia, N.V. Morze, O.S. Polat, S.O. Sysoieva, P.V. Stefanenko, V. Koval et al.). In these works considerable attention is paid to the development of electronic textbooks, educational manuals, automated training systems, electronic teaching and learning complexes for student training.

Theoretical, methodological and methodical foundations of ICT development, issues of design, creation and application of ICTs on the example of electronic teaching and learning complexes are reflected in the works V.Bykova, R.S. Hurevych, Yu.O. Zhuk, O.V. Shestopaliuk et al. Particularity of ICT usage in the training of teachers are considered in scientific, educational and methodological works of M.Iu. Kademii. Issues related to the formation of professional knowledge of students of universities by means of multimedia, are reflected in the dissertation research of H. Kedrovych, L.L. Konoshevskij, V.M. Kukharenko, V.I. Sumskoj. However, the question about the determination of the optimal structure and possibilities of using electronic educational-methodical complexes (EEMC) still remains in unsupervised work of medical students in order to increase the efficiency of the educational process and improve their professional knowledge acquisition.

1. EEMC, their structure and didactic capabilities.

Effective use of ICTs in the process of shaping the professional knowledge and skills of future physicians is possible only when during the training the individual work of each student will be provided. Researches show that getting acquainted with new learning material and learning it is much more effective when, in addition to traditional teaching methods, the teacher uses programmable teaching aids (Robert & Samojlenko, 1998). The use of ICT in the learning process allows the following principles of learning to be realized: an individual approach to each student; consistency and systematic presentation of educational material; visualization of information; varying the complexity of the training material (Semenova, 2004).

ICTs can be effective only when they are used on a systematic approach: when compulsory hardware is available, software that is created in accordance with the learning objectives, taking into account the achievements of pedagogy and psychology, should be applied. Implementation of ICT capabilities allows the development and usage of pedagogical software tools (PST), oriented to the implementation of various types of educational activities: interactive working mode with the computer; integration with other software; a variety of educational tasks. When developing and using PST, there is a need to create such teaching materials that would provide the educational process by means of ICT, for example, EEMC.

At present time, considerable attention is paid to solving the problem of ensuring the conditions for independent and differentiated mastery of knowledge by students. In this case, in order to obtain effective results, the teacher has to prepare a whole complex of various educational materials, the usage of which will fully provide the student with the necessary training information. It can be printed, audio or video materials, electronic textbooks, educational manuals, simulators, laboratory workshops, electronic teaching and learning complexes, etc (Koval, Tolkachova, Neboha, 2017).

It should be noted that the use of the above-mentioned educational and methodological materials is aimed primarily at creating conditions for independent student activity. However, in order to obtain an effective result, it is necessary to prepare a whole complex of materials that constitute the "case" of a student and a teacher. In the process of forming such a case, the multimedia approach becomes more and more popular when the student is provided with electronic educational and methodological complexes in the disciplines are being studied. These EEMCs are structured in a special way for information materials and recorded on magnetic media or accessible through a computer network.

The quality of students' acquisition of learning material from any discipline depends on the quality of the teaching manuals, which are used in learning. And electronic teaching manuals, when ICT is being used in the learning process, declare themselves as a promising kind of didactic material. Many researchers, who are working in the field of computer didactics, believe that as well as the traditional (paper) tutorial, electronic teaching methodical manual (ETMM) is a reflection, a diagram, a model of the educational process, a reflection of the goals of learning, the peculiarities of the discipline being studied, the psychology of mastering the educational material, the strategy of the teacher's and student's educational activities (Kukharenko, 2001). The main difference between ETMM and other kind of manuals is the presence of feedback. The more precisely the didactic material (electronic or paper) reflects the learning process, its peculiarities, the higher the degree of mastering the training material is (Krylov, 1996).

To increase the effectiveness level of learning, it is necessary to create such ETMMs that adapt to the student's level of knowledge and provide him with material in a given volume and consistency.

Possibility of providing feedback - is recognized by all the benefits of ICT - allows you to control the unsupervised work of students, provide operational assistance in the implementation of practical tasks, change the planned training course depends of the results of the analysis of student's educational activities.

In our opinion, the implementation of the main ideas of teachers regarding the structure and the representation of educational material is possible only in case of their participation in the creation of the EEMC. This should be a collaboration between teachers and a group of software developers. Electronic educational methodical complexes are used in such basic processes of functioning of the education system as teaching, informing,

communication, as well as in the auxiliary and managerial processes: installation, updating of information resources, documenting, students' training, etc. It should be noted that in the teaching process, the EEMC has to perform the following functions: preservation of educational materials on discipline; selection of content, sequence and teaching methods; presentation of educational materials in a convenient and illustrative form; assist students in solving applied tasks; submission of reports and control works; computer modernization of the objects and processes are being studied; processing the results of the experiment; support for the development of educational documentation; control of knowledge.

Informing means the following functions of the EEMC: search for learning information on request; formation of the current information on the organization of the educational process. The communication function of EEMC can include, for example, communication between students and teachers, between students in a group, between students and outside thematic conferences. Documentation process is displayed in EEMC using following tools: keeping a journal of success; execution of copies of educational materials at the request of the student, teacher.

The student's learning process is supported by the EEMC's help function.

Thus, the integration of the considered functions under a single interface can significantly improve the quality of EEMC, and therefore, improve the quality of the educational process in general.

In the practice of pedagogical activity, various electronic materials are increasingly used: educational and work programs; schedules and/or graph of lectures and practical classes; theoretical materials; textbooks, dictionaries; maps and charts, tables, illustrations, collections of tasks and exercises; themes of works, abstracts, coursework; questions and tests for self-control; modelling programs for business games and more.

The creation of the EEMC provides for appropriate methodological and technological systematization of the above mentioned materials in accordance with the following conditions: the structure of the modules should be clear and consistent with the logic of the development of the content and the principles of didactics; each module should be formed as a complete volume of information; the structure of the module should correspond to the content; the names of modules and themes should be clear, concise and consistent with the program; the content of the module should correspond to the significance and complexity of the material; the basic types of control and reporting of students for each module can be tests, control works; the duration of the student's work on each module should not exceed the established standards; sequence and specific terms of work on the content of the training material, control over the quality of knowledge determined by the student in conjunction with the teacher (Zaharova, 2001).

As convinced by the analysis of the relevant educational and methodological and pedagogical sources, electronic educational complexes - is a complex didactic system, which includes following functional blocks:

– informational and methodological (general information about the course; state standard of discipline; timetable for studying topics and sections; schedule, etc.);

– content (theoretical material, seminars, laboratory, practical works, electronic manuals, textbooks, reference books, encyclopedias, electronic presentations, methodical recommendations for the implementation of laboratory and practical tasks, main and additional sources, a list of themes of independent and creative works on discipline, etc.);

– Control-communicative (testing systems with implemented feadback for determining the level of initial training, intermediate and final control; questions for self-control; questions for assignments; colloquiums and examinations; evaluation criteria);

– corrective-generalization - the results of pedagogical monitoring of the educational process.

Among the modern products, which are integrated and automated training systems, following software packages can be distinguished: *Lotus Learning Space*, *ToolBook Assistant, Distance Learning Studio, VLE (Virtual Learning Environment)* etc. To work with such complexes, the teacher is required to structure and prepare the necessary materials in the form of files (lecture notes and practical classes, demo materials, dictionaries, practical tasks, questions and tasks for testing and control, etc.), and then to form in the dialogue mode a scenario for the organization unsupervised work of a certain student group or one student (Zaharova, 2003).

2. Usage of EEMC's which are prepared for the education of Discipline "Medical Informatics".

However, electronic tutorials, manuals, EEMC can be created even without the usage of automated training systems and without the skills of language HTML or another programming language. For example, for studying the discipline "Medical Informatics" we have developed the EEMC, which is built on the basis of a modular system. The developed EEMC has the following structure: methodological materials - the educational and work program of discipline, the thematic plan, requirements for the level of knowledge of students, criteria for assessing students' knowledge; teaching materials - lectures, practical, recommended literature and Internet sources, dictionary of terms, electronic educational manuals, etc.; materials for student knowledge control - questions for self-study, questions for control, themes for creative projects, etc.

Duringn detailing the discipline "Medical Informatics" and defining the structure of the EEMC, we must strive to ensure the EEMC's "life" as long as possible (ie, to ensure the relevance of the content of the EEMC). The basis for this may be the approach of "increasing the degree of universality of the educational material", its division into separated components, taking into account the timeliness and simplification of the conditions for the replacement of outdated parts and components, which should not affect the systematic and the relative completeness of the content and is particularly important in distance learning, when there may be a shortage of educational material.

In our work, we took into account that the electronic educational complex has to perform following functions: effectively manage the student's educational activities; stimulate educational and cognitive activity; ensure a rational combination of different types of educational and cognitive activity taking into account the didactic specialties of each of them and depending on the results of the learning of the learning material; rationally combine various technologies of presentation of the material (text, graphics, audio, video, animation); provide for the organization of virtual seminars, discussions, business games and other classes on the basis of communication technologies, provided in case they are located on the network. (Zaharova, 2003). The discipline "Medical Informatics" is studied by students of the following areas of training: medical business, dentistry, pediatrics, medical psychology. Work programs are designed for different areas of specialization of future physicians and have a professional orientation.

The EEMC on discipline "Medical Informatics" should solve the following tasks:

- providing wide and qualitative access to existing pedagogical software tools (PST), to the information resources of the portal of the department;
- creation of technical conditions for the search and study of the material presented in accessible type in the form of informational thematic blocks, which helps students to receive the necessary training information in full;
- stimulating the process of creating an innovative PST;
- educational and methodological support of the educational process, etc.

When working with the EEMC "Medical Informatics" the student receives access to educational materials in electronic form, can then print them or study the received teaching materials directly from the screen. In addition, during the process of learning, a student can independently and autonomously adress to different sections and types of work on discipline, which will help him to master theoretical and practical teaching material from discipline much better.

After studying a certain amount of material, the student can put questions to the teacher and get answers to them (by e-mail or with using Skype). To test the quality of assimilation, the teacher can put a number of control questions by sending them to the student by e-mail back. A student can also carry out self-tests using electronic tests, which are placed at the EEMC, to prepare for the defense of practical work, to prepare a score (exam). Such score (exam) the student can make in person, in direct contact with the teacher in the traditional form (on the examination ticket, which contains questions and practical assignments), followed by a response or remotely, fulfilling the score test.

Let's dwell on the advantages and disadvantages of EEMC compared to paper carriers. In our opinion, there are two essential disadvantages of the EEMC: 1) Necessity of special additional equipment for work with it. 2) Unusual, non-traditional electronic form of information representation and possible heightened fatigue during work on a computer.

In our opinion, the advantages of the EEMC are much higher, in particular, following:

1. Ensuring the *adaptation and optimization of the user interface* for individual user necessity. In particular, the ability to use both textual or hypertext and frame structure of materials as well.

2. Use of additional (in comparison with printed publications) means of action on the user *(video, sound, text, pictures, animation, etc.),* which allows user to quickly master and better remember the training material.

3. Possibility of constructing a simple and convenient navigation mechanism within the framework of the electronic educational complex with the help of hyperlinks, frames, map-images, which allow, without turning pages, to go quickly to the desired section or fragment and, if necessary, just as easily and quickly go back.

4. Developed *search engine* not only within and outside the EEMC. In particular, by hypertext links user can move around the text of the publication, view pictures, refer to other publications present in the complex.

5. The possibility of embedded *automated control of the level of knowledge* of the student, and on this basis, ensuring automatic selection of the appropriate level of educational material and the mode of its mastering.

6. Ability to *adapt the studied material* to the level of knowledge of the user, resulting in improved perceptions and memorization of information. The adaptation is based on the use of the modular structure of the EEMC.

7. Ensuring *interactive interplay* between the user and the elements of the EEMC.

All these advantages, in our opinion, certainly create the conditions for self-mastering students with the educational material outlined in the EEMC. Due to the interactivity and branching of exposition of teaching material, the student works independently not with the material that is provided continuously, but with separate screen fragments, which are submitted discretely. On the basis of such fragments a layered structure of educational material is being designed, which contains: a layer *required* for study; a layer for *more trained* students; a layer for *in-depth study* of certain sections; *auxiliary* layers; special stratum of *basic concepts and definitions* (dictionary of terms, instructions)*;* an additional layer of *recommendations for the application* of the acquired knowledge (annotation), etc. Such organization of educational material at the EEMC provides a *differentiated approach* to students depending on their level of training, which results is, in our opinion, a higher level of motivation for learning, which leads to accelerated learning of the material and self-mastery of knowledge in a convenient for students mode. An analysis of the experience of using EEMC in the educational process shows that the most effective are courses that contain teaching materials based on a nonlinear scheme that provides work with the EEMC at a higher level when the student has the opportunity to apply for additional teaching material for a more in-depth studying the issue under consideration (Zaharova, 2001).

3. Professional self- determination and construction of the image of the profession in future doctors

The success of professional self-determination of future specialists depends on the influence of a number of factors, both psychological and social, since professional self-determination, being a component of the overall process of self-determination, is closely related to the socialization of the individual (Cvetkova, 2000). The main type of student training is mastering a system of knowledge about the content and structure of the future profession.

The study of the psychological factors of professional self-determination of future medical workers also involves an analysis of the influence of personal determinants on the process of self-awareness in the medical socio-occupational environment. This, in turn, requires the inclusion in the analysis of professional self-determination of the driving forces, sources of personality activity (its needs, motives, attitudes), as well as real actions and actions. Self-determination is not just an act of decision-making or awareness of oneself. "Professional self-determination is the activity of a person who acquires one or another content depending on the stage of its development as a subject of labor," and "content - is, first of all, images of the desired future, peculiarities of awareness of themselves and their place in the system of business interpersonal relationships" (Klimov, 2005).

Therefore, professional self-determination should be considered not only as a process of development of self-consciousness, which has its own internal mechanisms, but also as a special type of activity of the individual.

Pedagogical support for the development of students' professional self-awareness implies the following main areas of activity:

- diagnostic - identification of individual peculiarities of students' professional consciousness, problems and deformations in its development, reflexive analysis of subjective perceptions about professionally important personal qualities and self-assessment of their formation, assessment of the adequacy of professional claims;

- advisory - development of individual recommendations for the correction and development of professional self-knowledge of students, group and individual counseling on problems of professional self-identification, assistance to students in developing individual programs for the correction of professional self-awareness;

- corrective - the influence on the development of professional self-knowledge of students in order to eliminate deviations in its formation, refinement of professional self-esteem, activation of the assimilation of professional standards and values, development of professionally important qualities, formation of skills and skills of person-professional reflection and self-improvement;

- orientation - formation of the subjective position of students, stimulation of their desire for personal and professional self-development and self-improvement.

Formation of professional self-awareness of future doctors should occur in stages: 1) at the diagnostic-reflexive stage, by means of diagnostic methods and analysis of their results, the initial level of professional self-consciousness of students is determined, the deformation in the development of its components is determined, the problems with their correction are outlined; 2 at the developmental-correctional stage in the course of classroom and non-auditing activity of students, a complex of forms, methods and methods of educational and educational interaction aimed at activating personal and professional reflection, the formation of adequate professional identity and self-evaluation, the refinement of professional representations, the formation of value attitude to professional activity as means of personal self-realization; 3) at the evaluation-productive stage the results of development-correction work are summed up, the dynamics of representations of students about the professionally important qualities of a specialist and their formation in oneself are analyzed, changes in professional values, self-esteem, attitude towards himself as a subject of professional activity, motivation of educational activity, activity professional self-improvement.

It should be noted that the question of the formation of professional self-knowledge of specialists of different fields attracted the attention of many domestic and foreign psychologists and educators. The analysis of peculiarities, specifics and professionalism of the medical profession is presented in works devoted to the general problems of medical education (V.O. Averin, T.L. Bukharina, Z.S. Kuntsevych, I.N. Kosyrev), as well as the issue of personal and professional development of doctors (L.L. Alekseieva, A.H. Vasiuk, I.P. Hurvych, M.I. Zhukova, V.M. Zaitseva, S.I. Tykholaz, B.A. Yasko).

It is worth noting that the problem of the development of professional self-awareness of the future physician is not enough. M. I. Zhukova studied self-awareness as a factor in the success of a doctor's work. A.G. Vasjuk. He studied the peculiarities of self-medication of doctors depending on their length of service (Vasjuk, 1993). As noted G.S. Abramova and Ju.A. Judchic, the variety of professional situations in medical activity translates the moral models of the behavior of the doctor into a category of objective necessity for the medical profession (Abramova, 1998). The content of professional self-knowledge of practitioners of surgical profile is disclosed in the doctoral dissertation (Mironova, 1999).

However, most of the studies carried out concern sociological occupations - mainly teachers and psychologists. Although, the activity of a doctor is one of the most complex of functions and character.

4. The essence of the concept of "self-consciousness".

For the category of "professional self-consciousness", the notion of "self-consciousness of the individual" is a generic; therefore, in the process of forming the professional identity of students, it is necessary to rely on the general characteristics and properties of self-consciousness of the individual.

The word "consciousness" means involvement in knowledge. Accordingly, professional consciousness is the involvement in professional knowledge, understanding the basis of the profession. K.A. Abul'hanova notes: "In the consciousness of one person," abstract "- the theoretical knowledge can be represented in an orderly, harmonious system, forming what is called" thesaurus". Often unclaimed in life knowledge is constantly "forgotten", turning into a rather vague idea. This testifies that even knowledge acquired on the basis of intellectual interests is "translated" into the context of life, profession, that is, become relative to the subject " (Abul'hanova, 2006).

An important prerequisite for the productivity of pedagogical support for the development of students' professional self-awareness is the observance of a number of principles: voluntariness, creative position, partnership communication, and complexity. The principle of voluntariness is based on the freedom of choice, including the direction of its own professional and personal development. For a person who has a desire for self-improvement, in particular in training and future professional activities, psychological counseling can become a pedagogical support for both professional growth in general and the development of its professional self-awareness.

At the same time, the reflexive analysis of the received information relating to self-personality may be an important factor in the activation of students in the training and future professional activities.

Also important is the implementation of the principle of partnership communication, because without the students' confidence students can not reach the goal of counseling. The implementation of this principle involves the creation of an atmosphere of security, trust, openness, which avoids the closeness of communication and find the best ways to solve the problems of personal and professional formation of students.

The principle of complexity requires the integration of various directions of educational work, aimed at the development and correction of professional self-knowledge of future economists in the pedagogical process of economic higher education. The development of students' professional consciousness is possible provided that a holistic social and educational environment is created, which would serve as a source of assimilation of professional norms, traditions and values by future economists. To do this, it is necessary that the issues of professional self-awareness be given special attention during classes, studying general and professional disciplines, conducting extra-curricular educational work, organizing research activities, industrial practices and internships for students.

According to A.K. Markova, professional self-awareness is a person's awareness of norms, rules, models of his profession as standards for the realization of their qualities (Markova, 1996). Professional self-consciousness reflects the foundations of professional outlook, the subjective concept of professional activity, the awareness of professionally meaningful qualities, the comparison of oneself with some abstract ideal or a particular

colleague; knowledge of self-assessment as a professional on the part of colleagues; self-esteem by the subject of their separate parties - an understanding of oneself, their professional behavior, and also an emotional attitude towards oneself. According to A.K. Markova, professionals with a prevailing professional self-awareness increase their work efficiency, satisfaction with their profession, aspiration to self-fulfillment, self-actualization increases, self-confidence increases (Markova, 1996).

5. Analysis of "professional image".

Without diminishing the importance of the substantive component of the educational environment that is being formed at a higher educational institution, at the same time, we believe that the development of professional self-knowledge of students is more influenced by the socio-psychological climate, the nature of interpersonal interaction of subjects of the pedagogical process.

Special role in the creation of a professional-value educational environment in the university belongs to teachers teachers, curators, managers of practice, which are intended to demonstrate to future experts samples of value attitude to the profession and through the psychological mechanism of identification to influence the development of their professional self-consciousness.

Formation of the personality of a future economist as a specialist depends to a large extent on the personal qualities of teachers, their authority, the ability to influence the thoughts and feelings of students. The form and methods of behavior and communication of the teacher with the students have a powerful educational force and have a significant impact on the development of professional student self-awareness.

Teachers can convey their professional beliefs to students only if they value human dignity in themselves and in other people, act in accordance with their own beliefs and provide students with the same freedom of choice, belief in themselves and in them, love them and take care of their personal and professional becoming. For the transfer of professional and ethical values, it is also important for a teacher to have a communicative skills and to address students' minds and feelings when considering issues of professional ethics. Having a deeper knowledge and skills in comparison with students and being authority for them, a good teacher at the same time demonstrates in his example respect for the dignity of a person and talks to students "on equal terms", regardless of their age and nationality. Any manifestations of arrogance and attempts to impose their opinions on issues of professional values and morals, as a rule, cause a negative reaction from students. Only if the teacher represents such a system of professional and moral principles, which is a model of self-fulfillment, the students will believe in the truths proclaimed by them and will perceive them.

The design of the "image of the profession" is crucial for the development of the identity of the professional, because it is precisely because of the "prism" of the profession that the individual considers the individual characteristics of the representatives of this

professional group, comparing their own qualities and abilities with them. The images of the "typical professional", "ideal of the professional" and "himself as a professional" are the result of such an analysis of individuality. In turn, the dynamics of representations about the features of professional activity and communication involves changes in the corresponding professional images.

In order to analyze the dynamics of students' perceptions of the profession of a doctor at various stages of vocational training, an empirical study was conducted in which 98 students National Pirogov Memorial Medical University (from 1 to 6 courses). The content of the actual representations of students about their future profession was studied with the help of the method "Associative Halo of the Profession" (Klimov, 1996). Students were offered to independently write the professions that are associatively associated with the profession "doctor" and to explain, on the basis of which the manifestation of kinship, associative link between these professions. The obtained results are presented by the associative ailerol of the profession "doctor", which is specific in its content and the number of associations for each course.

6. Criteria for homogeneity of the doctor's profession with other professions.

The analysis of the criteria used by students for the relationship of the doctor's profession with other occupations was carried out according to five criteria:

- general features of the profession (assistance to people, communication, working with people, reducing suffering, helping to preserve health, interfering in the personal sphere of a person, social significance, economic status, etc.);

- signs of the subject of professional activity (kindness, sensitivity, endurance, intelligence, analytical mind, sociability, tolerance, ability to understand another, abilities to empathize, "rescuer", "human expert", "healer", etc.);

- signs of the object of professional activity (a person as an object of work, unpleasant people, the elderly, etc.);

- operating characteristics (stages of work, collection of analyzes, diagnostic treatments, prevention, rehabilitation, restoration of mental functions, formation of useful skills, etc.);

- ethical signs ("no harm", professional secrecy, Hippocrates's oath, protection of the interests of the patient, respect for the person, etc.).

In the process of professional formation of students, reflection helps to form adequate representations of oneself as a representative of the corresponding profession, a standard image of a professional, an idea of the degree of its compliance with professional requirements through comparison with others. It allows students to better understand themselves, find out their own compliance or non-compliance with the requirements of the economic profession, form an adequate professional I-concept, identify the limits of their own professional capabilities, learn about their strengths and weaknesses, the causes of probable successes and failures, activate professional self-improvement.

7. Representation of students about future professional activity.

To find out the dynamics of professional representations, we also used the method of unfinished sentences. Students were asked to complete the phrase "My future profession for me ...". Analysis of the results shows that students of initial courses perceive future professional activities as a distant future, which will not come soon. Students of senior courses, in contrast to the initial, formed a view on the profession as a way of personal self-realization and a way of personal growth.

Conclusions.

Thus, it can be noted that the structuring of the teaching material of the EEMC from the discipline being studied allows the student to receive training information at the modern level; gives an opportunity to determine the degree of mastering the educational material and to adjust the course of further education individually for each student; the means of feedback provide the adaptation of the content of the EEMC to the individual professional requirements of students.

The implantation EEMC into the learning process expands subjective student status in its educational activities, because it allows each student to find their optimal educational training strategy: time, rate, amount of educational material, consistency assimilation, etc., and also alows to the teacher to chose an additional didactic grounded methods of mastering students of new knowledge.

The usage of EEMC in the educational process of the medical university allows to ensure the quality of the formation of skills for independent learning, the implementation of information, training and research activities, the ability to process information, develops the intellectual potential of students, etc. We see our further work as to fully identify and substantiate the conditions and methods for the effective usage of electronic teaching and learning complexes for the organization of unsupervised work of students in the study of discipline "Medical Informatics".

The lack of a special pedagogical leadership leads to the formation of narrow, limited frameworks of the actual situation models of the future profession, inadequate perceptions of themselves as a subject of professional activity, impeding the further professional development of students. In connection with this, the problem of substantiation of pedagogical conditions and the definition of pedagogical ways of formation of professional self-consciousness of future specialists of doctors as a personal precondition of the success of their educational and professional activity becomes important.

Based on the analysis of psychological, pedagogical literature and peculiarities of the professional formation of specialists in the medical profile, the essence of professional self-consciousness as a complex integral personality formation is determined in the study, which determines the self-regulation of behavior and activities in the professional sphere on the basis of awareness of professional requirements, their own professional capabilities and emotional an attitude towards himself as a subject of professional activity.

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CAPACITY BUILDING OF INSTITUTIONS OF HIGHER EDUCATION AS THE BASIS FOR FUTURE SPECIALIST PROFESSIONAL COMPETENCES DEVELOPMENT

Abstract*. There have been considered the essence and content of professional competence of future financiers. There have been analyzed scientists' different approaches to determine the essence of the professional competence concept and its components. The measures have been proposed to update the national system of pedagogical education with the purpose to correspond financiers' professional competence with the growing requirements of the international market environment. The process of professional competence formation of the future specialist in finance has been considered and the stages of professional competence formation and development of future specialists have been highlighted. It has been established that the process of professional competence formation is carried out on the basis of the technology of activity and personality oriented learning, which is implemented through practical activity and the European credit transfer system, which allows to implement a systematic approach to learning and to form a flexible dynamic structure of hierarchical relationships between training levels. The article has identified the main components that form the corresponding potential level of institutions of higher education in the form of an integral indicator. There has been made the forecast of this indicator with the help of modern methods of forecasting on the example of Kyiv National University of Technologies and Design. There have been systematized the indicators that form the corresponding level of higher educational institutions potential and predicted the integral indicator of potential on the example of KNUTD. All these will create the basis for preventive and operational management of institutions of higher education in the process of working out higher education development strategy as the basis for the formation, development and improvement of professional competence of modern specialists.*

Introduction.

The modern stage of the society development, Ukraine's integration into the European Union sets new qualitative tasks in education. Education Development National Doctrine of Ukraine in the XXI century defines the main goal of education to create conditions for the development and self-realization of each individual as a citizen of Ukraine. In times of rapid economic transformation on the way to market relations of full value, the state needs highly skilled specialists, able to work both in the domestic and international economies.

The integration processes lead to changes in the requirements for the qualification characteristics of modern professionals who can quickly solve non-traditional tasks, make sound management decisions, qualify for business contacts with foreign partners, and competently conduct professional activities in a foreign environment. Under these conditions, a graduate of an education institution needs the following qualities as professionalism, initiative, mobility, entrepreneurship, responsibility, ability to analyze the situation on the domestic and international markets, the ability to continuous self-education. This leads to increased requirements for the preparation of specialists at a competitive labor market.

The influence of educational system development level becomes indisputable on the state of economic, social, political and other processes taking place in the state. The important role of institutions of higher education (IHEs), which become market economic operators with the characteristic features of competitive struggle, is growing. The winners in this struggle are universities with high rating indicators of educational, scientific, social and other kinds of activity, capable to ensure the formation of professional competencies of high-level specialists. The analysis of scientific and pedagogical literature implemented by us allows us to conclude that scientists and educators constantly pay attention to the problems of vocational training of specialists in economics and finance. L. Dibkova and R. Geyserskaya devoted IHE publications to the studies of competence successful formation of future economists based on the principles of an individual approach. In particular, R. Geyserska considered the issue of supporting masters of economics' professionally significant qualities as a result of vocational training in institutions of higher education. I. Demura's works are related to the professional competence formation of students of economic specialties. Y. Derkach takes care of the issues of economists' preparation in the conditions of application of new learning technologies.

Unfortunately, domestic teachers-researchers do not disclose the essence and principles of the implementation of training specialists, particularly in the financial profile. Some nuances of this problem are only mentioned in separate publications by G. Astapova, S. Piletska, D. Babasheva, O. Voronkova, A. Epifanova. In addition, the scientific research of these authors is, mainly, aimed at identifying problems concerning the quality assurance of financial education and determining the prospects for its development.

Organizational and methodical aspects of the preparation of financiers taking into account the labor market needs are highlighted in the publications of G. Starostenko, R. Kvasnitskaya. L. Dmytrychenko has been investigating the application of the structural and functional approach to the formation of curricula and programs and the training of specialists as a determining condition for ensuring the ability of the national education system to compete. He argues that it is increasingly difficult to predict the demand structure in the labor market for highly skilled workers and to develop appropriate recommendations for adjusting curricula.

He also notes that the basic functions of higher education management are not being implemented properly, the existing structure of specialties does not "cover" professional needs. He expresses the opinion on the need for its updating, with an increase in the curricula content quality, and for IHE "tying up" to the priority directions of the domestic economy development.

1. Results and Discussion

The importance of professional competence development for future finance specialists in the field of management and administration is determined by the specifics of IHE professional responsibilities, the intensively growing requirements of the international market environment towards the financiers' professional competence and the formation of IHE professional personal qualities and solid knowledge.

The successful entry of Ukraine into the European education space requires a fundamental upgrade of the national system of pedagogical education, which includes:

1. Exit to a new integration level of science and pedagogical education. The current education state requires a teacher to constantly update knowledge, the ability to study throughout life, to be a scientist and researcher, to form adequate skills and qualities in IHE professional development.

2. Radical modernization of the pedagogical education content: the elimination of ideology, outdated forms and methods, the approach to socio-cultural realities and modernization of the future.

3. Democratization of education policy: decentralization of the education system, increasing the autonomy of universities, mobility of teachers and students, the introduction of public management of an education institution.

4. Organization of early vocational guidance for graduates of secondary schools: definition of vocations, psychological and professionally significant qualities.

5. Educational work implementation on a multicultural basis: the formation of tolerance, ability to live together, respecting ethnic and cultural diversity.

6. Increased mobility of teachers and students, student autonomy, IHE self-organization level: exchange between teachers and students of institutions of higher education, training students in foreign universities, conducting joint pedagogical experiments, etc.

7. Implementation of the credit-module training system.

However, despite a significant number of attempts to solve a wide range of scientific problems in the mentioned topic, the issue of potential management of IHE as a foundation for the professional competencies development has not been sufficiently studied, which has led to the choice of the topic and its relevance. The formation of students' professional competence as a goal of vocational training was previously regulated by the relevant state documents: educational qualification characteristic and education and professional program of training specialists in a certain field of training and specialty.

Nowadays, institutions of higher education independently develop education programs in accordance with the requirements of the Ministry of Education and Science of Ukraine, which prescribes program competencies and program learning outcomes.

The formation of students' professional competence is carried out through the content of vocational education, in the process of mastering disciplines, distributed between different training cycles. The special cycle of professionally oriented disciplines corresponds to the future specialists' professional needs and allows graduates quickly to adapt to practical activities. The disciplines of the general scientific cycle (social and natural sciences) provide knowledge, skills and abilities in the field of fundamental sciences. The content and volume of education credits in social sciences are well defined, but natural sciences vary depending on the specialty. These sciences play an important role in the theoretical basis of modern higher education, consistently introduce students into the content of the chosen specialty, and provide further qualitative assimilation of professionally oriented (profile) disciplines of general-professional and special cycles.

During life, any person has to solve three types of problems: 1) professional – directed to the tasks set before a specialist as a professional; 2) social and productive – associated with activities in the field of work relations in the team; 3) social and everyday life problems which arise in everyday life and associated with leisure, family communication, physical and cultural development, etc., and may affect the quality of specialist's performance in social, production and professional tasks. According to the complexity level, there are three task classes of future specialists' professional activity: stereotyped, diagnostic and heuristic, which meet the different levels of formation of knowledge, skills and abilities of students [1].

The formation of professional competence is possible provided that students develop a reflexive attitude, analyze IHE own professional competence. In this regard, the process of professional training of future specialists in finance should be aimed not only at changing the intellectual sphere of students (professional knowledge, skills, abilities), but also at developing IHE motivational sphere (the formation of motives for professional self-improvement, the need for success), valuable and reflective sphere (professional self-awareness, adequate self-esteem and level of aspirations), emotional and volitional sphere (readiness for self-education, development of independence and responsibility).

It should be emphasized that the formation of separate components of the professional competence of future specialists in the finance is carried out by means of all educational disciplines, which are assigned to different training cycles. The specifics of IHE content and goals ensures the fact that students can enter the real space of professional activity, form a range of professionally relevant qualities. We anticipate that strengthening the interdisciplinary integration in the system of professional training of future specialists in the finance will achieve a higher level of professional competence.

We consider the process of the professional competence formation of a future specialist in the finance as a transformation of its functional states, the transition from one state to another. The analysis of the existing psychological concepts of professional development of a specialist in the system of higher professional education allows us to identify the stages of professional competence formation and development of future specialists.

The first stage is preparatory (I-II courses). It focuses on the development of general and general economic competences in the context of future professional activities. At this stage, students master the methods of mental activity (analysis, synthesis, generalization, comparison, classification, etc.). They possess the main methods of educational and cognitive activity; master the information technology tools at the user level, learn to plan IHE time, set goals and choose ways to achieve them, solve problems that arise during the learning process. One of the important issues is to acquire basic knowledge of disciplines of the social and humanitarian cycle and object mathematical and general economic training. The students have to gain experience in solving educational tasks, search for the necessary teaching materials using a variety of tools of modern ICT; analyze the results of IHE own educational and cognitive activity, create a positive motivation for learning, etc.

The second stage is basic (II-III courses). A student "immerses" in professional tasks, learns ways to solve them, uses interpersonal connections, and develops the ability to use mathematical apparatus and information technology to solve professional economic problems. At this stage, development deepening of general and general economic competencies takes place and the professional competencies formation takes place. At this stage, there is an expansion and deepening of the knowledge system gained by students at the first stage of the professional competence formation, integration of previously acquired experience in solving educational problems with the experience of solving tasks of professional orientation. The main tasks of the training at this stage are students' mastering of the main methods of educational and professional activities; formation of students' skills to generalize and systematize IHE experience in order to use it independently in situations of future professional activity; formation of students' skills to do the reflection of educational and professional activities, etc.

The third stage is integrative (IV course). This stage is the development of professionally oriented competencies based on the development of general and general professional ones. In the third stage, students acquire experience in solving tasks of future professional activity, forming professionally significant personal qualities of the future specialist of finance, professional readiness, and valuable attitude to professional activity

After this, the stage of special competencies development comes. This stage coincides with the period of study in the magistracy [2]. The process of developing the professional competence of students has three stages: formation, active development and the stage of self-development. At the stage of formation, students learn to acquire knowledge,

develop abilities at the reproductive level, formulate motivation for learning, and have a positive attitude towards educational and cognitive activity. At the stage of active development, students deliberately use skills and knowledge, need personal self-realization in the educational environment, have such developed qualities as reflectivity, creativity, critical thinking, have the developed skills of self-regulation of educational and cognitive activity. The main goal of the stage of self-development is the development of autonomy, creative activity, self-organization and self-management of IHE activities, updating the need for self-development.

At each of the three stages, individual components of professional competence are getting greatest development. At the preparatory stage, such a component is motivational and emotional and volitional, in the second stage, the basic component is cognitive and active, the third, integrative stage, there is an integration of all the components based on reflexive activity.

The mechanism of motivation activities lies at the heart of the development process of professional competence. Therefore, the process of professional competence formation from the pedagogical point of view is to create external conditions for the emergence, awareness and further self-development of student's internal aspirations (motives, goals, will, emotions) regarding the successful implementation of educational activities, mastering this activity.

The professional competence development of students is carried out through professionally directed educational and cognitive activity, which involves encouraging students towards the process of independent search and "discovery" of new knowledge; mastering new ways of activity; through methods of using various forms of work. A means of developing professional competence is the content of the educational material of disciplines, which is characterized by professional significance for the student.

The result of the professional competence formation and development is graduates' readiness for any socially necessary economic activity; the ability to master the knowledge that is the basis of any professional activity independently; the formation of personal professional qualities [3].

The readiness as the final and logical result of the educational process is the personal formation of interrelated components: motivational and valuable (personal) cognitive and procedural (active). These components include theoretical readiness, practical readiness, psychophysiological readiness, psychological readiness.

The theoretical readiness is characterized by a sufficient amount of social and humanitarian, mathematical, fundamental economic and applied professional knowledge necessary for professional activity. The formed knowledge should be manifested in analytical, predictive, projective and reflexive skills.

The practical readiness is characterized by the formation of the necessary level of professional skills and abilities that will ensure the performance of professional tasks.

The psychophysiological readiness reveals the availability of appropriate prerequisites for mastering professional activity, forming professionally significant personal qualities: organizational (business activity, responsibility, demanding, initiative, ability to work, ability to organize themselves); communicative (sociability, justice, affability, benevolence, modesty, responsiveness, tact); perceptive (observation, understanding of other people, creative attitude to the cause, etc.); expressive (emotional susceptibility and responsiveness, optimism, sense of humor, endurance, ability to persuade, etc.).

The psychological readiness reveals the motivational and valuable graduate's attitude to work, which is the basis of selective focus on the value of professional activity. Such readiness implies the presence of emotional and volitional qualities that allow the individual to deploy and maintain activity, despite barriers and obstacles that may arise (and they do) along the way (conscious mobilization of volitional efforts, work orientation, ability to self-management and self-organization, managing IHE behavior). In the end, the psychological readiness determines the current focus on professional activity.

The formation of the indicated competences of future specialists in institutions of higher education is possible only with the corresponding conditions, components that form the potential of an education institution. It includes the staffing potential of the education institution, the material and technical base, the ability to innovate , etc.

The relevancy to study the issue of potential management of the institution of higher education is dictated olso by a significant reduction in budget funding, which the state directs to train specialists of various education and qualification levels [1, 2].

In such conditions, universities receive the status of an economic operator of full value and the opportunity to engage in entrepreneurial activities providing various types of services (educational, research, design, etc.), to determine the types of this activity independently, and, ultimately, to make profit [2, 3, 4]. There will be investigated the potential of Kyiv National University of Technologies and Design in order to identify its main trends. In recent years, various ways of presenting information graphically are widely used. This is due to the information perception effectiveness obtained through visual channels, and the computer graphics development, as well as the expansion of its application. Graphic representations are usually an aid to decision making.

So, to solve the problem there will be used the multicriteria method of estimating "Spider - CIP" [5], the algorithm of which can be represented as the following steps:

1. Setting up alternatives for comparison.
2. Evaluation criteria selection.
3. Circle image, drawing radiuses for each criterion.
4. Range selection of the criteria desired values placement: a circle edge or its center.
5. Radii grading: in relative units or in quantitative, conditional qualitative or others.
6. Applying the criteria of the evaluated alternatives.
7. Comparable alternatives connect radii points, closed line - polygon (web).

8. An irregular polygon (n-angle, where n is the number of criteria) is formed on the polar diagram. The evaluation rule is based on the diagram: the best alternative corresponds to the smallest or largest area of the polygon, depending on the desired values of the criteria ("good", "bad"). If the best values are applied closer to the circle edge, the best alternative is chosen by the largest polygon area.

Within the research framework, there has been offered the following structure of the university potential: material, technical, personnel, functional, marketing, innovative, infrastructural, financial and institutional.

Let us determine the indicators to evaluate each component of the university potential.

1. The personnel component and its contribution to the potential may be reflected by such indicator factors as:

a) level of scientific and pedagogical qualifications of the staff. Among the indicators there are:

– the proportion of people with a scientific degree of a doctor and a candidate of sciences (X_1);

– the number of people who hold the title of Academician and Corresponding Member of the National Academy of Sciences of Ukraine, Honored Worker of Science and Technology of Ukraine, Honored Worker of Higher School, other state awards, Honorary titles of foreign higher educational institutions, international organizations (X_2);

– a consolidated index of university staff citation in international and refereed Ukrainian editions, a number of heads of scientific and educational grants, executed on orders of ministries and departments of Ukraine, administrations, international and Ukrainian funds and organizations, etc. (X_3);

– international experience and international mobility of university staff (the share of interns who conducted teaching, scientific research in foreign scientific and educational centers) (X_4);

b) labor activity results. Among the indicators there are:

– a number of monographs, textbooks, manuals published abroad and in Ukraine (X_5);

– a number of author courses taught in foreign educational institutions, revenues obtained from joint contracts with industry and the commercial sector for the implementation of the scholarly endeavor (X_6);

– percentage of foreign students from the total number of students (X_7);

– a number of working languages in which teaching is conducted (X_8);

– a number of master's programs, etc. (X_9).

2. The material and technical component. Its contribution to the potential may be reflected by the following indicator factors:

– educational and scientific areas per one hire (X_{10});

– educational and scientific areas per a student and a postgraduate (X_{11});

– a share of modern scientific equipment in its total cost (X_{12});

– a number of computers per ten students (X_{13});

– a number of scientific laboratories created with the participation of the National Academy of Sciences of Ukraine (X_{14});

– a number of departments established in organizations where the results of university scholarly endeavor are used (X_{15});

– a number of storage units in the scientific library (X_{16}).

3. The innovative component and level of its use. The most significant indicator factors include:

– a number of scientific schools recognized by the national and world community (X_{17});

– a number of monographs, textbooks, manuals published abroad and in Ukraine (X_{18});

– a number of patents and certificates of authorship received by university staff (X_{19});

– a proportion of scholarly endeavor with confirmed economic effect from the implementation of IHE results (X_{20});

– costs for libraries and resource centers of study (X_{21});

– a number of post-graduate students, including from foreign countries (X_{22}).

4. The marketing component of the university potential. Its contribution to the cumulative potential may be reflected by the following indicator factors:

– amount of advertising funding for universities (Internet, personal communications, etc.) (X_{23});

– amount of financing for exhibition activity and vocational guidance work (X_{24});

– amount of financing for the university's image: corporate image, advertising slogan, corporate colours, corporate font set, corporate values, legend, etc. (X_{25});

– amount of financing of international cooperation programs (X_{26}).

5. The infrastructural component of IHE potential. Its contribution to the potential can be reflected by the presence of indicator factors such as:

– modern communication tools (X_{27});

– a transfer agency of the staff intellectual work results of an institution of higher education (X_{28});

– branches and representative offices of the university abroad (X_{29});

– university participation in clusters, technology parks, economic zones (X_{30}).

6. The financial component of university potential. The most significant indicator factors include:

– income amount from educational and scientific activities per one hire (X_{31});

– income amount obtained from the export of educational services (X_{32});

– income amount derived from the sale of intellectual property products in the national and world service markets (scientific, consulting, marketing, etc.) (X_{33});

– amount of financing from the state, regional and local budgets (X_{34});

– amount of financing by international funds and organizations (X_{35});

– cost value for developing personnel, production, innovation and infrastructural capacities (X_{36}).

7. The functional component of IHE potential. Its most significant indicator factors include:

– variety and efficiency of applying forms and tools for attracting foreign investment, stimulating the staff innovation activity (X_{37});

– conformity of the university organizational structure management, form and complexity of the tasks to be solved (X_{38});

– level of action coordination of university management different levels (X_{39});

– availability of strategy and target programs of higher education development (X_{40}).

8. The institutional component of university potential. Its main indicator factors are:

– existence of a developed legal framework regulating the organization of staff academic and scientific activities, production and financial relations with customers of educational and scientific services (X_{41});

– staff loyalty towards the actions of the university authorities (X_{42}).

In order to determine the most significant indicators of university potential assessment, IHE expert evaluation has been carried out. There have been involved 25 experts from Kyiv National University of Technologies and Design.

According to the existing methods, the experts conducted a ranking of the proposed factors. In this case, the minimum rank value was assigned to the most important indicator.

To confirm the consistency of expert opinions, the coefficient of concordance has been calculated:

$$w = \frac{\sum_{i=1}^{n} (S_i - \bar{S})^2}{\frac{1}{12} \cdot m^2 \cdot (n^3 - n) - m \cdot \sum_{j=1}^{u} T_j}, \quad (1)$$

Where S_i is the sum of expert rank evaluations for each indicator factors;

$\bar{S}$ – average amount of ranks for all indicator factors;

m, n – number of experts and indicator factors respectively;

T_j – value that takes into account the same estimates of various indicator factors by individual experts.

At the same time, $\bar{S}$ та T_j are calculated according to the formulas:

$$\bar{S} = 0{,}5 \cdot m \cdot (n+1) \quad (2)$$

$$T_j = \frac{1}{12} \cdot \sum_{j=1}^{u} (t_j^3 - t_j), \quad (3)$$

where u is a number of ranks with the same estimates of j-th expert;

t_j is a number of estimates with the same rank of the j-th expert.

It is believed that the closer the concordation coefficient to the unit is, the more concurred the opinions of experts are.

One of the methods for confirming the significance of the concordance coefficient is its assessment by Pearson criterion χ^2. If $\chi^2_{cat} > \chi^2_{tabl}$, then the concordation coefficient is significant at freedom degrees $f = n-1$ at a given level of significance $\alpha = 0{,}01$.

The estimated value of χ^2 was determined by the formula:

$$\chi^2 cat = w \cdot m \cdot (n-1) \tag{4}$$

The results of the expert evaluation have allowed to substantiate the final list of indicator factors for assessing the level of university potential.

To obtain a single indicator for assessing the university potential, it is necessary to convince all indicator factors into a single integral indicator. This indicator is the area of the obtained polygon (S_{IHE}), which is calculated by the formula:

$$Shei = \left(\sum_{i=1}^{i=n-1} \frac{X_i \times X_{i=1} \times \sin \frac{2\pi}{n}}{2} \right) + \frac{X_n \times X_1 \times \sin \frac{2\pi}{n}}{2}, \tag{5}$$

where i – a serial number of indicator factor;

n – a number of indicator factors used;

X_i – value of the indicator factor calculated by the formula:

$$X_i = \frac{R \times (I_i - I_i^{min})}{I_i^{max} - I_i^{min}}, \tag{6}$$

where I_i — actual value of the factor in the current year;

$I_i^{min}; I_i^{max}$ – respectively, the minimum and maximum value of I_i at the higher educational institution for the period considered;

R – the radius of the area diagram, taken equal to 1.

The calculation results of the integral index of S_{IHE} for KNUTD in 2012-2016 are presented in Table. 1

To obtain the coefficient of achieving the reference value of the potential (I_{IHE}), which characterizes the situation of a separate university in the considered population, the next formula was used:

$$I_{IHE} = \frac{Shei}{Sref}, \tag{7}$$

where I_{IHE} – a coefficient of achieving the reference value of the potential of the institution of higher education;

S_{IHE} – an integral indicator of potential assessment of a separate university;

S_{ref} – an indicator of the potential of a reference university.

Table 1

Integral indicator of KNUTD potential *(S_{IHE})* in 2012-2016

Components of the university potential	Factor indicators	2012	2013	2014	2015	2016
Personnel	X_1	0,040	0,044	0,045	0,049	0,056
	X_2	0,012	0,015	0,018	0,024	0,035
	X_3	0,010	0,012	0,015	0,023	0,032
	X_5	0,040	0,041	0,045	0,053	0,057
Material and technical	X_{11}	0,081	0,090	0,094	0,094	0,102
	X_{12}	0,052	0,063	0,070	0,070	0,080
	X_{13}	0,018	0,019	0,024	0,025	0,037
Innovative	X_{17}	0,018	0,020	0,024	0,027	0,039
	X_{19}	0,035	0,048	0,047	0,061	0,072
	X_{22}	0,024	0,034	0,038	0,042	0,059
Marketing	X_{23}	0,024	0,036	0,042	0,045	0,071
	X_{26}	0,050	0,064	0,081	0,091	0,115
Infrastructural	X_{27}	0,094	0,106	0,147	0,147	0,147
	X_{28}	0,081	0,099	0,108	0,115	0,111
Financial	X_{31}	0,050	0,063	0,073	0,068	0,080
	X_{32}	0,025	0,034	0,039	0,038	0,047
	X_{33}	0,026	0,029	0,032	0,040	0,042
	X_{34}	0,045	0,042	0,050	0,058	0,072
Functional	X_{37}	0,088	0,088	0,091	0,096	0,111
	X_{40}	0,118	0,118	0,147	0,147	0,147
Institutional	X_{41}	0,118	0,118	0,147	0,147	0,147
	X_{42}	0,105	0,108	0,111	0,115	0,121
Integral indicator of KNUTD potential assessment	S_{IHE}	**1,154**	**1,293**	**1,488**	**1,575**	**1,778**

Source: own elaboration.

The integral indicator of the potential assessment of the reference university will be calculated as the area of the right polygon with the side 1:

$$Sref = \frac{n}{2} R^2 \sin\frac{2\pi}{n} \tag{8}$$

where n – the number of factor indicators used;

R – the radius made around a polygon circle, in our case $R = 1$.

Table 2

Achievement coefficient of the reference value of KNUTD potential in 2012-2016

Indicator name	2012	2013	2014	2015	2016
Assessment integral indicator of KNUTD potential *(S_{IHE})*	1,154	1,293	1,488	1,575	1,778
Achievement coefficient of the reference value of KNUTD potential (I_{IHE})	0,37	0,41	0,47	0,50	0,57

Source: own elaboration.

The substantiation of perspective directions of institutions of higher education development is impossible without the use of methods of economic and mathematical modeling and statistical analysis. The forecasting purpose is to determine the level of institutions of higher education potential and to substantiate measures for its improvement in the short and medium term. Proceeding from the prediction that the development pace of the institutions of higher education potential remains stable for several successive years, it is expedient to use the method of analytical equalization for the definition of the trend and perspective forecasting. The purpose of the analytical alignment method lies in the mathematical description of the trend dynamics of the actual values of the institutions of higher education potential depending on the conditional value of time *t*.

There are applied functions for the analytical alignment of the dynamics series, among which the most used are: linear, parabolic, exponent and exponential. The expediency of using one or another function (a straight line or a curve) to describe the trend of the indicators dynamics is determined by the determination coefficient. The closer this indicator approaches 1, the more objectively the selected function describes the dynamics of the analyzed criterion.

The interval width for each *i*-th observation is determined by the formula:

$$\Delta_i = Ttabl \cdot \sqrt{MSE \cdot (1+s)}$$

$$MSE = \frac{SSE}{m-k} = \frac{(y_t - \hat{y}_t)^2}{m-k} = \frac{0{,}00249}{5-2} = 0{,}00083. \quad (9)$$

To determine *MSE*, we will perform additional calculations in Table 3.

Table 3

Intermediate calculations to determine the ultimate time boundaries

t_i	y_t	$\hat{y}_t$	$y_t - \hat{y}_t$	$(y_t - \hat{y}_t)^2$
1	1,154	1,151	0,003	0,00001
2	1,293	1,304	-0,012	0,00013
3	1,488	1,457	0,030	0,00093
4	1,575	1,611	-0,035	0,00121
5	1,778	1,764	0,014	0,00021
As a whole				*0,00249*

Source: own elaboration.

With a probability of 90% $t_{tabl\ 5\text{-}2;\ 0,05}$ = 2,353 width values of the interval for each i-th observation are summarized in Table 4.

Table 4

Retrospective and predictive values of the integral indicator assessment of KNUTD potential

Years	Interval width	The integral indicator value for assessing KNUTD potential		
		pessimistic	most reliable	optimistic
Retrospective period				
2012	0,086	1,066	1,151	1,237
2013	0,077	1,227	1,304	1,382
2014	0,074	1,383	1,457	1,532
2015	0,077	1,533	1,611	1,688
2016	0,086	1,678	1,764	1,849
Predictive period				
2017	0,098	1,819	1,917	2,015
2018	0,113	1,956	2,070	2,183
2019	0,130	2,093	2,223	2,353
2020	0,148	2,228	2,376	2,524
2021	0,167	2,362	2,529	2,696

Source: own elaboration.

The graphic interpretation of the forecast of the assessment integral indicator of KNUTD potential is presented in Fig. 3.

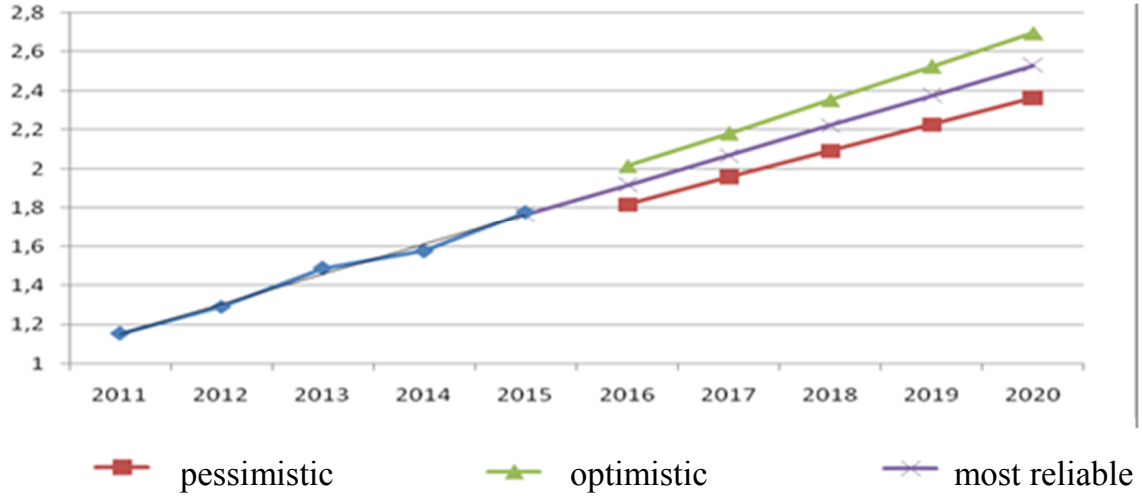

Fig. 3. Predictive values of assessment integral indicator of KNUTD potential

Source: own elaboration.

Consequently, the dynamic series of forecast indicators in 2016-2020, obtained as a result of the study, show an increase in the assessment integral indicator of KNUTD potential. Since the predictive values are constructed taking into account the retrospective dynamics, achievement of the indicated level of assessment integral indicator of KNUTD potential is possible provided that the existing policy of KNUTD development is preserved. In the case of KNUTD intensification, the growth rate of the assessment integral indicator of the education institution potential will be higher.

Conclusions.

The structural components of the professional competence of future specialists are formed simultaneously, but each stage of the development process is oriented to a certain level of the investigated personality education. The development of the personality and student' professional competence are mutually determined and mutually supplemented processes, for the implementation of which there is a need for a pedagogical technology, which is oriented on self-education, self-development, self-realization of the individual. The process of professional competence formation was carried out on the basis of the technology of active and person-oriented learning, which is implemented through practical activities and the European credit transfer system, which allows to implement a systematic approach to learning and form a flexible dynamic structure of hierarchical relationships between levels of training.

Increasing the level of institutions of higher education attractiveness is possible through the coordination and analysis of internal factors-components that form its corresponding level. This will enable institutions of higher education in Ukraine to carry out IHE educational and economic activities to the utmost, to act as an equal partner in the international market of educational services.

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EXPERTNESS APPROACH TO THE DEVELOPMENT OF INTELLECTUAL CAPITAL OF A REGION

Abstract*. The influence on the economic development of intellectual capital regions is considered. It is analysed its (intellectual capital) essence and components. The main stages and subjects of the formation of intellectual capital are characterised. The emphasis is on the meaning and features of a competent approach to the creation of intellectual capital. Systematised requirements for the intellectual capital of the region. The revealed factors of influence on the formation of intellectual capital. The role of public power in ensuring the development of the intellectual capital of the area is determined.*

Introduction

Sustainable development of the regions should be carried out mainly due to intensive factors. The directions of development are selected according to the global goals of society and from natural resource potential. In addition to natural resource components of the inherent possibility of development of territories, there is economic, scientific and technical, innovation, labour potential. But the degree of use of natural resource potential and the further development of economic, scientific and technological and innovative potential is impossible without the proper development of labour potential.

A unique feature of the new millennium is the change in the system of values, the growth of the role of knowledge and intellectual capital. Intellectual capital itself becomes the most valuable resource, the driving force of economic growth, the key to competitiveness, efficiency, harmonisation of human interaction with nature.

Only the entrepreneurial economy, in which innovation is a unique tool of entrepreneurial activity, can successfully develop. Therefore, the country or region can use

its capabilities only through the purposeful formation of human capital, which depends on natural abilities, level of education, labour activity, competencies that determine the effectiveness of labour activity.

It should be noted that in many countries of the world, the outstanding results of economic development are not achieved "due to the presence of a favourable natural resource potential" and "despite its absence". The significant role is played by intellectual capital.

Therefore, the development of intellectual capital in such regions, which have low investment attractiveness, is of particular importance. For example, the Kherson region has unique natural opportunities, but for socio-economic development, it belongs to outsiders. Ukraine has similar positions in the European community.

In the conditions of functioning of the Ukrainian economy, it is hard to expect an inflow of foreign capital. It is worth relying mainly on their capabilities. Therefore, the task of forming and developing the intellectual capital of the regions is particularly relevant. First: the definition of the competencies of the various components of its economic complex necessary for the implementation of the strategy of social and economic development of the region. Secondly, the rationale is the choice of subjects that ensure the acquisition of the necessary competencies. Finally, the role of public authorities in providing the development of intellectual capital of the region and the development of a system of levers of influence on economic entities and educational activities.

1. The nature and components of the intellectual capital of the region

Awareness of the growth of the role of man, his personal qualities, in ensuring the life of firms in a market economy led to the emergence of the term "human capital". By definition the winner of the Nobel Prize in Economics Paul Samuelson and Professor of Yale University William Nordhaus (1998, p. 330), this "means the stock of useful and valuable knowledge accumulated during the training".

Although this term was widely disseminated at the end of the twentieth century, Adam Smith began to develop the idea of investing in human capital for the first time. A. Smith argued that the opportunities of people with different levels of education and training lead to the receipt of different incomes, the share of which is necessary to pay for the acquisition of skills and new knowledge. Therefore, income from investing in vocational training can be compared with income from investments in tangible assets (Armstrong, 2005, p. 65).

According to the definition of most economists, human capital "consists of acquired knowledge, skills, motivation and energy, which are endowed with human beings and which can be used over a period to produce goods and services. It is a form of capital because it is a source of future earnings "(Voronkova, 2006, p. 386).

This definition is similar to the interpretation of the term "intellectual capital" provided in the textbook on economic theory – it is "accumulated in the process of intellectual activity a set of knowledge, experience, skills, abilities and relationships that have economic value and are used to generate income" (Bazylevych, 2008, p. 294). However, all scholars consider intellectual capital to be a broader concept than human capital, which is a component of intellectual capital. At the same time, the views on the elements of intellectual capital are different.

So, experts in economic theory believe that the components of intellectual capital of a separate company are human and structural capital, which includes: client capital (relations with customers, suppliers, trademarks, etc.) and organisational capital (information resources, electronic networks, copyright rights, etc.).

The same authors focus on investing separately in social capital, which exists only in relations between people and its "objective basis are social networking networks used for information, education, formation of rules of conduct and reputation, based on decency, reliability, consistency, loyalty, honesty, openness, adherence to universally accepted moral and ethical values "(Bazylevych, 2008, p. 294-295).

Another sees the structure of intellectual capital Michael Armstrong (2005, p. 64):

1. Human capital – knowledge, skills and abilities of employees of the organization;

2. Social capital – the transfer of knowledge through the network of relationships in the middle of the organization and the external environment;

3. Organisational capital – institutionalised knowledge stored in the database, instructions, methodological materials of the organisation

On this basis, human capital is inseparable from personality, public capital is formed through the spread of knowledge, and organisational capital remains the property of the organisation.

According to the authors, the three-component structure is more logical and acceptable. First, the authors of the two-component composition to the organisational component of intellectual capital include electronic networks, which are the material means of production. Secondly, the isolated social capital has many mutual features with the client's wealth, and honesty, openness, and observance of generally recognised moral and ethical values become possible only in the presence of appropriate qualities in people, that is, they are an integral part of human capital.

In the scheme of Michael Armstrong clearly separated personal capital of a person who is its property, the inalienable features of a person are the desire and ability to share their knowledge, experience, ability to establish and maintain business relationships; thanks to communications formed social capital, which is the property of the employees of the organization and the public. Individual human capital is the property of a person, and when it is dismissed, the organisation loses this capital. And the organisational capital reflects those intellectual properties of the employees who become the property of the organisation, can be used even if the author loses relevant ideas and developments.

However, according to all authors, the main component of intellectual capital is human capital, which according to Hrishnova (2001, p. 14) simplified "can be interpreted as labour potential, realised in the marketplace in recognition of the productive nature of investments in the human economy". The possibility of comparing human capital with labour potential becomes apparent when we consider that the concept of "human capital" is used at various hierarchical levels (Hrishnova, 2001, p. 16):

– on a personal level, as private human capital, reflecting the human potential in providing services and receiving income from it through its productive characteristics (knowledge, skills, experience);

– at the microeconomic level, human capital reflects the aggregate productive abilities of the employees of the enterprise (organisation), the effectiveness of which depends on the managers' capabilities and the achievements of the enterprise in the implementation of the organisation of work and staff development;

– at the macroeconomic level (or mesoeconomic) human capital is considered as the aggregate capital of all economic entities and citizens of the region, the result of which depends on the organisation of effective interaction between the components of the economy of the region and the country.

Human capital, as well as potential, reflects the possibilities not only of an individual but also of all employees of the enterprise, residents of the region, country, which allows considering human capital as labour potential.

From the standpoint of human capital, each employee is the embodiment of a set of skills used by the employer. Knowledge and skills gained during education and work experience form a certain margin of productive capital, whose value assessment at various hierarchical levels is related to the need to solve a range of problems.

First of all, one should proceed from the assumption that human capital is a measure of the "incarnate of man's ability to generate income" (Bazylevych, 2008, p. 293). Then it is quite appropriate to consider the suitability of evaluating it on a personal level by the amount of discounted income from work throughout life (Voronkova, 2006, p. 35). At other levels, it is necessary to determine the individual value of a person "as a component of the enterprise's assets, region, country."

Since the 60s of the twentieth century, experts from the leading countries of the world have been trying to develop methods for valuing human assets. In 1999, three types of human resources assessment models were analysed:

- the first one is "an expense" that considers acquisition costs and alternative costs for human assets;

- second – "the value of human resources" (HR), which considers behavioural and monetary economic value;

- third – "monetary", which provides for the calculation of future income.

As a result, it's evident that all models have defects related to the subjectivity of ratings, uncertainty and the corresponding unreliability. Therefore, accountants and financial analysts reject the very idea of evaluating human resources. Besides, they think it not ethical to consider people as financial assets, since no firm "owns" people (Armstrong, 2005, p. 69).

Ukrainian scientists are also investigating the problem of assessing the individual cost of an employee for employers. The team of authors led by prof. Voronkova [3, p. 397-401], among the most suitable models, was chosen by the scientists of the University of Michigan, which is based on the notions of nominal (expected) and realised value.

Nominal (expected) value of an employee (NV) is determined by the number of services that he will provide to the organisation for the period of work in it. NV considers all the profits an organisation could bring to an employee, working throughout her life. Realised value (RV) is calculated based on NV and the expected duration of a particular specialist in the organisation. That is, RV is a probabilistic characteristic.

Determining each component of this model requires some assumptions. Expected duration of work at the enterprise of each employee can be determined by expert methods or based on analysis of the accumulated statistics, the compilation of matrices of the probability of transition from one post to another or dismissal. It is also problematic to assess the personal contribution of employees to the future earnings of the firm. Undoubtedly, estimating the value of labour is an urgent problem that needs further research. But the main attention deserves the necessary provisions that both private capital and the public is determined taking into account the possible income for the firm (earnings and moral satisfaction for a person) per unit time and duration of work in a particular structure for organisations (life for a person). The previous leads to the conclusion that at the mesoeconomic and macroeconomic levels, human capital depends on the health and life expectancy of a person, the income it receives per unit of time. These revenues depend on the level of education of the population and wage policy.

With the corporate approach to managing a region as a multi-sectoral corporation, the importance of social and organisational capital of the region increases. The dissemination of knowledge, cooperation between business entities provides an opportunity to obtain a synergistic effect from their interaction, contribute to the formation of a positive image of the region.

2. Expertness approach to the development of human capital

To reveal the content and meaning of the expertness approach to the formation of the core component of the intellectual capital of the region - human capital, should consider the main stages of its creation.

First of all, it should be noted that without personal human capital it is not possible to form the aggregate human capital of the enterprise, region, country. Human capital is inseparable from a particular person, and its formation requires time, money and human desire to strengthen their health, gain knowledge and skills. Individual human capital depends on the physical, intellectual and psychological characteristics of a person, the desire to learn and use their experience in practice. Since capital accumulation is to generate income, people should be given the opportunity not only to develop their physical and intellectual abilities but also to acquire the professional knowledge, skills, skills that are needed in different fields of activity.

In the process of the formation of personal human capital, it is possible to distinguish three main stages.

The first stage – preparatory which creates the prerequisites for further intellectual development, a healthy lifestyle, active work to meet their own needs and society. That is, the formation of human capital begins in childhood (at home or kindergarten). The first "contribution" in shaping the future qualities of a person is a family, which together with preschool establishments should create conditions for healthy physical and mental development of the child, identifying her abilities, educating the aspiration for learning and achievements in the further development of their abilities, careful attitude to the environment the environment. A specific role in this may be played by television. The child must understand that every person should work, choose a profession, make money, and for this it is necessary to study.

The isolation of subsequent stages is based on the position of the need for the distribution of human capital to the general and specialised, which is formulated by scientist Gary Becker. The total capital is human literacy and has value irrespective of the scope of human labour. Dedicated human capital can be used in specific industries, spheres of activity (ICPS, 2008, p. 33).

Accordingly, the second stage is fundamental because it creates the intellectual base for further professional development. Although the family continues to influence the formation of the child, as a person, his attitude towards others, his duties, the country, the influence of the environment, friends, and teachers becomes stronger. School education, together with extracurricular institutions, mainly determines the future of the region and the country because of its impact on the physical condition, the way of life of young people, its desire to become the creator of positive changes, and creates an intellectual basis for further professional development. At this stage, the organisation of leisure, the creation of conditions for each child to identify their abilities and use opportunities for their further development becomes a particular value. The pursuit of any sport in the presence of qualified trainers contributes not only to physical development but also to the formation of a healthy lifestyle, an active life position, a respectful attitude to teammates, rivals and community.

The third stage is professional training. Depending on preferences and general theoretical practice, young people may be trained to work in the system of vocational education in order to provide the sectors of the economy with highly skilled workers or to acquire higher education. At this stage of the formation of intellectual capital of the region it is necessary to take into account that at the regional level, the effectiveness of development depends on the availability of working population useful for the implementation of strategic knowledge plans. Therefore, professional and higher education regarding quantitative and qualitative parameters should be brought into line with the regional development strategy.

For this purpose, it is expedient to build a regional system for the formation of labour potential, which is implemented in the market space in the form of human capital. It is necessary to determine the modern requirements for workers of different categories and ways to ensure that their professional and moral qualities are in line with these requirements, because according to experts, the industry or the size of the enterprise, and the business qualities and the will of their management personnel, play a decisive role in achievements in Ukraine.

Bogdan Budzan (2001, p. 171-172) assesses the business qualities of the leaders of Ukrainian enterprises of the beginning of the new century. Such as meeting modern requirements are reformers capable of providing a stable financial position in conditions of unpredictable barriers, flexibility, timely response to changes in demand, and avoiding acute social and labour conflicts, there are 33%. Able to maintain the current functioning of enterprises, mainly on the basis of effective commercial policy, but which are conservatives, do not seek structural adjustment and other positive changes - 25%. The rest of the managers (42%) are not able to bring enterprises out of a crisis. He also emphasises that, in order to make positive changes in Ukraine, managers must become intellectual capitalists, which, according to P. Drucker, are systematic innovators who purposefully and systematically analyse opportunities for implementing changes that will result in economic or social innovation [Budzan, 2001, p. 292].

Therefore, to resolve managerial problems, it is necessary to develop a capable human resource potential.

President of the Mitsubishi Integrated Research Centre, Nooba Makino, analysed the causes of the backwardness of the former Soviet Union in the development of high technologies by the "peaceful" industries and drew attention to the fact that Soviet plants did not resemble research institutions, and in Japanese factories it was possible to meet Doctors of Technical Sciences (Inaba & Tsutsumi, 1991, p. 91). In general, Japan has a contingent of scientists capable of carrying out scientific and technological developments in the field of high technology. Therefore, the advantage is given not to the use of import licenses, but to their events. The experience of the former republics of the Soviet Union also indicates the effectiveness of scientific activity and the innovative approach to enterprise management. In Kherson, one of the largest cotton factories in Europe and the only manufacturer of thin

fabrics in Ukraine (Batista, Chiffon) was in Ukraine, which supplied its products to dozens of countries around the world. The smaller size but similar to the main equipment (without the possibility of production of thin fabrics) there was an enterprise in Tiraspol (Moldova). The difference in the competence and target orientation of managerial staff has led to the development of opposing trends and outcomes. The leadership of the Kherson Cotton Factory was guided by the principle of "doing only what was recommended by the ministry", the initiative of department heads and employees of all units did not support. The result is that the company left ruins and a shopping and entertainment centre called "Fabrika", built in one of the buildings of the former world-famous giant of the cotton industry. The leadership of the Tiraspol Cotton Factory was guided by the principle of "not forbidden, it is allowed", experimenting, and introducing market relations between the divisions of the enterprise. Even in the times of the planned economy, the position of deputy director of science existed at the enterprise. The deputy directors for technical development, commercial activities, studied the technical achievements of Japanese textile enterprises, appealed to textile and textile technology specialists of the only Ukrainian higher education institution that trained specialists in the textile industry (now Kherson National Technical University). The result - the company "impresses" with its achievements, the entrepreneurial, innovative approach has become characteristic for all categories of employees.

For the successful completion of transformation processes in Ukraine, training of specialists capable of removing enterprises from the crisis, providing a stable financial position, appropriate changes in the assortment structure, forming a positive image, implementing strategic management, and finding optimal ways for the harmonious development of the society is required.

Only higher education is possible to meet the needs of the newest knowledge. It also contributes to the growth of people's well-being, the prosperity of their intellectual and spiritual capabilities, the strengthening of international trust, the reduction of criminalisation of society, protection and preservation of the environment, self-realisation of the individual. However, it is necessary to change the approaches to defining the content of education and learning technologies.

The training system formed in the times of the planned economy was aimed at training exclusively "performers". The creative approach only created problems, because the Ministry drew attention only to the final indicators without considering the conditions for their achievement (assortment, technical equipment, etc.). Therefore, the scientific substantiation of the range and the identification of the costs of reducing costs was completed by bringing to the enterprise excessive but unbalanced plans, which made it impossible to execute them. The ideal leader was the one who always executed plans, and for this purpose, at their approval, it was necessary to "hide" the reserves and prove the inability to increase production volumes.

At the stages of preschool and school training brought up "obedience" and "humility". Curricula for all levels of training were approved centrally and should be fully implemented. Students have always complained about a lot of "unnecessary" subjects, which they will never need to know. However, employers considered graduates not well trained for practical work. Therefore, the system of training specialists requires qualitative changes.

Maybe use the experience of developed countries, which is dominated by an expertness approach. So, the American scientist D. McClelland (1973) emphasised that the effectiveness of human activity depends on its expertness, that is, its developed competencies. The American approach has now become recognised and used in many countries around the world. Let's consider different points of view regarding the essence and interconnection between the concepts of "competence" and "expertness". From the point of view of the authors, these terms are most clearly defined and delimited in the Encyclopaedia of Education. "Competence - alienated from the subject, the social norm (a requirement) for the student's educational preparation is predetermined, necessary for his qualitative activity in a particular field." Expertness is a personality characteristic of a person who determines the possession of her acquired not only during a study but also self-development, an influence of the environment, qualities that are necessary for certain professional activities (Kremen, 2008, pp. 408-409). Ukrainian authors consider the highest form of manifestation of expertness – skill (Havrysh, Dovhan, Kreidych & Semenchenko, 2017, p. 221).

Implementation of the expertness approach requires radical changes in the education system. It should be focused on the formation of competencies that are necessary for the student chosen by the future kind of activity. To do this, you need to have a flexible system that provides the student with an informed choice of his "own" program. For example, in the United States, each state has certain characteristics in the education system: different programs, systems of assessments. The main task of the school is "preparing for real life". Therefore, children learn to independently acquire knowledge, allow them to choose the content of training, which in their view will help them adapt to the requirements of the labour market, the term of study. The basic requirement is the number of credits per semester. Depending on his mental abilities and financial capabilities, the student can receive education in a short or long period of time (Maslak & Koblianska, 2016).

The growing importance of competence-oriented learning has drawn attention to this phenomenon of many international organisations. In particular, UNESCO has identified the main competencies that people need to acquire to address a variety of life issues: an ability to learn, ability to work, self-development, and ability to live together (OECD, PISA, 2005).

The European Commission for Europeans has identified the following key competencies: knowledge of the mother tongue and foreign languages; mathematical, fundamental natural science, technical; computer; educational; interpersonal, intercultural, social, civic; entrepreneurial, cultural (Tuning Project, 2000).

Each country, considering international requirements, forms its models of competences for various fields of activity. Large companies define the competencies that must be inherent to each employee, reflecting the peculiarities of corporate culture. Also, models of skills for different categories of employees and levels of management, their role in ensuring the achievement of the aims of the organisation are developed. So, for employees who carry out the production process, the preference is given to technical competence. They relate to the field of specialised knowledge, skills, skills of employees, their diligence and orientation to the quality performance of work. For employees who organise the production process, the value of organisational skills, the establishment of relationships. Ukrainian experts consider it desirable to allocate three types of competencies in the management activities of the governing body of organisations (Havrysh, Dovhan, Kreidych & Semenchenko, 2017, p. 238-239):

– General (fundamental): knowledge and skills in the management of organisations, finance and accounting, the foundations of law and legislation, human resources management, strategic management, use of IT technology and information management, ability to write and oral communications;

– Social and personal: an ability to learn, adherence to standards of the healthy lifestyle, ethical behaviour towards other people, creativity and ability to systematic thinking, criticism and self-criticism, adaptability and sociability, tolerance, leadership;

– Professional: the ability to plan the activities of the unit (company), organise their work in accordance with the requirements of safety of life and health, motivate staff, negotiate, manage conflict situations, control the work of subordinates, and form the corporate culture of the organisation.

Various organisations complement the list of core competencies that ensure the success of activities in the relevant field.

Expertness approach to the formation of intellectual capital of the region requires not only the definition of the necessary competencies for workers of various spheres of activity in the area (agricultural production, industry, services) but also the training of qualified specialists, increase of their life expectancy, an increase of wages. These problems should be solved by the civil servants of the regions. Also, in order to ensure sustainable development of the region, it is necessary to take care of the balance of development, solving complex and diverse social problems. Therefore, the requirements for the competence of civil servants increase significantly. Of particular importance is the emotional competence, the acquisition of which contributes to self-control, relationship management, responsiveness, the ability to cope with complex and conflict situations in such a way that there is no hidden image, the use of useful tools of non-material stimulation (Rovenska, Klindukh, & Rakytianska, 2018, p. 121]. Also, experts emphasise the necessity of forming the psychological readiness of civil servants for activities in the context of European integration (Akimov, Afonin, & Klymenko, 2016).

3. Public regulation of the development of intellectual capital of the region.

One of the main tasks of our society is the reform of education, which covers the problems of public financing and qualitative changes.

Formation of capital requires investment. By definition of Hrishnova (2004, p. 98) "human capital – is formed or developed as a result of investment, and accumulated by people (man) a certain stock of health, knowledge, skills, abilities, motivations and other productive qualities that is purposefully used in a particular field of economic activity, contributes to the growth of labor productivity and, as a result, affects the growth of the earnings (earnings) of its owner".

The state budget remains the primary source of funding for higher education in many countries. In the second half of the 90-s of the last century, the almost free study was carried out at universities in Austria, Denmark, Greece, Norway, Finland, Great Britain, Sweden, and Germany (Vasylchenko, Hrynenko, Hrishnova & Kerb, 2005, p. 128).

Studies conducted on the example of the United States showed that the profitability of higher education largely coincides with the indicators of the efficiency of investments in physical capital (10-15%). In Ukraine, experts argue that the internal rate of return on training at the expense of the budget funds of specialists with complete higher education (0,365 or 36,5%), professors (0,435 or 43,5%), associate professors (0,635 or 63,5%), which exceeds profitability of any other investments (Vasylchenko, Hrynenko, Hrishnova & Kerb, 2005, p. 208).

It is crucial for Ukraine to provide qualitative changes in learning technology. This changes will allow not only the provision of specific knowledge but also the formation of the ability to learn the nature of processes, identify problems, make conclusions, be flexible and sensitive to current chaos, perceive rapid change as a chance to express their abilities and become a creator a better future.

Education is an important, but not the only, factor in the formation of human capital, which is characterised by a combination of productive abilities of a person and his ability to provide income to himself, his enterprise (organisation). Productive skills of a person depend on his education, but they are also influenced by the state of health. The amount of money earned by a person depends on her longevity and wage level, which is primarily due to the country's economic achievements.

According to the indicator of life expectancy at birth, Ukraine lags behind most European countries. In 2014, this figure for women was 76,4 years, and for men - only 66,3 years. For 80 years, the expected life expectancy of women just in post-Soviet countries. More than 85 years of life expectancy in Luxembourg, Italy, France. Men live somewhat less in all states, but much more than in Ukraine. Over 80 years of life expectancy in Iceland, Italy, Cyprus, the Netherlands, Norway (Zhuk, 2016, p. 545-548).

Among the regions of Ukraine, the life expectancy of women was the smallest in the Odessa region (75,69), and the largest in the Ternopil region (78,00). The expected life

expectancy of men was the lowest in Zhytomyr oblast (63,59), and the highest figure in the Chernivtsi region (68,65) (Verner, 2017, p. 43-45).

To work full-fledged, only a person with the proper living conditions can reveal his creative potential. Therefore, the urgent task of the state is social development. Without immediate improvement of the living conditions, the efforts of the state to achieve the European level of education and recognition of our diplomas by European countries will be useless, because talented youth will only be able to work in neighbouring states in positions corresponding to their qualifications. Patriotic feelings of a person can't withstand the temptation to receive decent wages and comfortably live when she is unable to provide her family with healthy nutrition, to pay for domestic services, studying. So far, payments in Ukraine are only 6,5% of salary in the UK, and 7,2% are from its level in Germany, 9,2% in Italy, 24,5% in Poland, 28,2% – Hungary (calculated from Zhuk, 2016, p. 555-556).

There is too much difference in the payment of labour in the regions of Ukraine. Below the average for Ukraine, more than 20% wages in nine oblasts: Volyn, Zhytomyr, Kirovograd, Kherson, Khmelnytsky, Cherkassy, Chernivtsi, Chernihiv, and Ternopil. In Ternopil region, the average wage reaches only 61,7% of the level of remuneration in the Donetsk region (calculated from Verner, 2017, p. 17). Low wages help to increase migration, and the big difference between living standards in different areas is the basis of conflict situations.

Summarising the above, one should conclude that, in order to ensure sustainable economic development and reduce the outflow of population, strategic goals, both at the state and at the regional level, should be reasonable wage increases, the gradual approximation to the level of developed European countries.

At the same time, we should rely not only on the average salary in the region, because it is formed at the expense of enterprises of various sectors of the economy: industry, agriculture and services. Consequently, each area needs to develop its tactics to achieve strategic goals in ensuring an adequate wage. The specific features of this tactic depend on the existing position of the region in the country not only regarding remuneration, but also the development of the economic complex, the improvement of its structure. First of all, it is necessary to reduce the lag in wages from other regions. According to European standards, disparities in the development of areas for income should be no more than 25% of the average (European Union, 2014, p. 10).

Therefore, the leading solution requires not only the problem of raising the level of wages in Ukraine but also reducing the disparities in the income of the population between the regions.

In modern conditions, the Ukrainian Government cares mainly about raising the level of minimum wages, providing it with at least the subsistence minimum, and scientists focus on the development of theories of motivation for the activation of the work of enterprises. However, the problems of forming the regional strategy and tactics of labour remuneration

as an instrument of state regulation of the socio-economic development of the region remain unresolved.

The success of the improvement of the public regulation of the labour remuneration policy of economic entities depends on the clarity of the definition of the strategic objectives and the effectiveness of the mechanism of influence on them.

It is necessary to evaluate not so much the positive effects of wage growth as the reasonable limits of growth. From the standpoint of every person, undoubtedly, a desirable continuous increase in wages, which is the key to expanding the ability to meet the diverse needs of people who are continually evolving.

At the level of the state, the region, enterprises, in addition to the social value of improving the well-being of workers, must take into account the economic consequences of wage growth.

Growth in wages also contributes to increasing labour productivity, growing gross domestic product (GDP), gross regional product (GRP), and consumption, which has a positive impact on the market for goods and services. However, in order to increase real incomes, the supply of products should outstrip wage increases. Otherwise, inflation will rise.

Some experts believe that the improvement of the economy contributes to the rigidity of wages, especially during the period of depression. This point of view dominated the 30-s of the last century, but Keynes contradicted it. He argued that even a decrease in prices for products due to a reduction in wage costs would not be accompanied by an increase in aggregate demand, as the purchasing power of the population would fall (Dolan & Lindsay, 1994, p. 111).

It is also mistaken for managers of enterprises to solve economic problems and increase the competitiveness of products at the expense of reduction of wages.

Michael Armstrong (2005, p. 538) notes that according to the theory of the economic efficiency of wages it is possible to provide savings precisely at the expense of high salaries.

Shevchenko (2004, p. 454) also argues that wages are more effective than the average in the industry. It contributes to reducing staff turnover and the costs associated with the search, training and adaptation of new employees to business conditions; attraction of more qualified specialists; the motivation of labour and the corresponding increase in its productivity; consequently, reducing the unit cost of production; the possibility of lowering prices; increase in purchasing power of personnel, sales volumes and profits.

Regulatory functions at the regional level may consist in setting a minimum wage agreed upon with entrepreneurs, higher than legally stipulated, in order to achieve the desired increase in average wages in the region. It should take into account the structure of the economic complex of the region, the share of wages in operating costs of various industries.

In world practice, wages can amount to 70% of the costs of organisations, and a small percentage is considered 10-15 (Armstrong, 2005, p. 541; Henderson, 2004, p. 102). At the same time, the ratio in various industries at the end of the last century was as follows: the lowest wage (taken per unit) in catering establishments, the sale of consumer goods 1.3; textile enterprises – 1,6; communication and transportation services – 2.7; metallurgy industry – 2.9; oil and coal industry – 3.2 [calculated from Henderson, 2004, p. 191].

It should be noted that the overall efforts of entrepreneurship and government should be aimed at substantiating strategic objectives for increasing wages and salaries by industry. Positive influence on the dynamics of wages can also be ensured through advocacy measures, wide dissemination of information for benchmarking comparisons in various fields, and the formation of a positive image of enterprises and organisations that provide a high level of remuneration.

One of the most actual and acute problems for public regulation at the regional level is ensuring the employment of the population. An increase in unemployment negatively affects not only the health and life expectancy of the population but also needs additional funds for social payments.

Consequently, an essential component of the socio-economic policy of the regions is the labour market policy. In the process of its formation, attention is focused on the development of methods for forecasting the situation in the labour market and the implementation of appropriate changes in the financing and implementation of practical measures to support the temporarily unoccupied population, the organisation of public works, the creation of new jobs, training, etc.

The level of unemployment depends not only on the economic situation but also on the matching of supply and demand to employees of certain professions. On this basis, it is worth paying particular attention to the strategic aspects of forming the personnel potential of the region, which will meet the future requirements of the industrial complex of the region by the number of able-bodied personnel and professional knowledge and production qualities.

Currently, one of the topical issues of higher education is the "budget" order. Of great importance is not only its quantitative characteristics but also the "professional" composition and the recoupment of the funds spent by the state. Therefore, the state order should be formed predominantly at the regional level, based on the calculation of the perspective needs of specialists in accordance with the strategy of the region's development. Specialists whose preparation was carried out for budgetary funds should work for a certain number of years in the region. It is advisable to provide loans for higher education in particular specialities, the terms of return of which will depend on the number of years spent in the region (district).

Bases of entrepreneurship and strategic management it is expedient to teach not only students of higher educational establishments but also all those who wish.

For employees of enterprises and civil servants, acquiring skills of strategic planning and corporate culture formation is a prerequisite for achieving positive changes in the socio-economic development of both individual enterprises and the region as a whole.

Given the instability of the environment, entrepreneurs should master the methods of managing chaos, learn to perceive rapid change as a graceful opportunity to reveal their creative abilities, to realise their capabilities. But for this, one must be able to flexibly adapt to new conditions, be prepared for continuous improvement of knowledge. Therefore, in an entrepreneurial society, postgraduate education in the form of retraining or advanced training becomes an integral part of the general education system. In today's Ukraine, graduate education becomes strategic. This situation is due to the lack of knowledge in management and marketing, strategic management skills in the management of enterprises and civil servants and the inability to wait for the arrival of a new generation of specialists. It is a combination of experience with the new knowledge that will solve the problem of eliminating the crisis of enterprises in the region.

The best form of postgraduate education will be a combination of theoretical training in short-term seminars with the acquisition of practical experience in developing a strategy for the development of a separate organisation, district, and area under the guidance of specialists from higher education institutions.

Consequently, the formation of human capital requires the solution of many social problems:

- care for the health of the nation and overcoming the negative trends that lead to its "extinction" (reduction of mortality, increase in fertility and life expectancy);
- promotion of comprehensive human development, increase of free time and the creation of possibilities for its productive use;
- formation of an effective system of education of the population, which will ensure timely identification of various abilities of children and their development, obtaining the desired level of education, well-timed qualification improvement.

The presence of talented, educated people, does not guarantee the effective development of the organisation. There must be created such conditions that the employees sought to reveal their creative abilities and pleased to spend all their knowledge and skills on the implementation of the strategic objectives of the organisation, region, country. However, a person with developed creative abilities, capable of constant innovation, can't be a simple executor, a passive "cog" of a complex mechanism. Therefore, in order to implement the concept of sustainable development in Ukraine, first of all, it is necessary to develop "socially adequate management" (Bureha, 2001, p. 5). Adequacy is determined by the compliance of the management model with the ultimate goals of the system being managed (Bureha, 2001, p. 22).

In the realisation of the tasks of professional training of specialists for the region, the role of the business that provides the population with jobs, a certain level of remuneration,

generates financial results, which can be directed at training and staff skills development, improvement of the environmental situation, implementation of social programs at the enterprise and in the region. Large enterprises may have their structures for the realisation of vocational education, cooperate with higher education institutions to prepare management personnel for the required specialities and specialisation.

Encouraging employers to invest in human capital development is possible through the establishment of cooperation between power structures and business, external control by public councils, certification of management personnel of enterprises and organisations. Without the right to direct interference with the economic activities of enterprises and organisations, the community can become a powerful driving force for effective development. It is essential to involve the human and information factor, to give the impetus to the development of the competition in using their creative potential to improve their lives, to show the real opportunities for achieving high results in sustainable development.

Conclusions.

In modern conditions, the socio-economic achievements of different countries are increasingly dependent on existing intellectual capital, the main value of which is the ability to create and disseminate innovations. State regulation should be aimed at encouraging the population to learn entrepreneurs – to spend money on training employees. The solution of the first problem will contribute to the formation of specific public opinion about the promotion of such qualities of people as a good physical form, comprehensive development, punctuality, honesty, diligence, fertile imagination, the speed of decision making, weightiness and, at the same time, readiness for risk. Encouraging employers to invest in human capital development is possible through the establishment of cooperation between power structures and business, external control by public councils, certification of management personnel of enterprises and organisations. Without the right to direct interference with the economic activities of enterprises and organisations, the community can become a powerful driving force for effective development. It is essential to involve the human and information factor, to give the impetus to the development of the competition in using their creative potential to improve their lives, to show the real opportunities for achieving high results in sustainable development.

Public regulation at the regional level is necessary for all stages of the formation of human capital with the application of financial and economic, administrative and legal instruments and propaganda measures. Along with the regulation of the structure of expenditures in the region, provision of housing for dwellers, medical services, preschool institutions and educational facilities, it is necessary to create conditions for the physical development of a person, organisation of leisure, rest.

Confidence in the ability of young people to acquire the desired education, to get a job and enough to meet the needs of wages, will save the employable population in the region. To ensure sustainable economic development and reduce the outflow of the population, strategic

objectives, both at the state and at the regional level, should be reasonable wage increases, the gradual approximation to the level of developed European countries, reduction of differences between living conditions and remuneration in the regions. In order to fulfil the tasks of the preparatory and primary stage, it is necessary to provide pre-school institutions, schools with highly skilled specialists who are able to cause enthusiasm for children, the desire to learn the world, to be physically and spiritually developed, to achieve outstanding results in the future, to glorify their region, the country. Therefore, special attention of the regional authorities is needed by higher education institutions, which train teachers and educators.

Professional and higher education regarding quantitative and qualitative parameters should be brought into line with the regional development strategy. Therefore, it is necessary to develop indicative plans of needs in specialists to ensure the rapid socio-economic development of the region, the formation of budget orders for specialists.

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FORMATION OF ENERGY-EFFICIENT COMPETENCE OF SPECIALISTS ON EFFICIENT USE OF ENERGY SUPPLY SYSTEMS WITH COGENERATION HEAT PUMP INSTALLATIONS IN ENERGY-ECOLOGICAL-ECONOMIC ASPECTS

Abstract. *The idea of forming energy-efficient competence of specialists is focused on solving the problem of training modern specialists who are capable of ensuring a rational energy use of energy systems and objects with the highest energy and economic efficiency and environmental safety at a high professional level. In our study we propose the methodical fundamentals, based of our investigations, for application of the method of complex assessment of energy-ecological-economic efficiency of energy supply systems (ESS) with cogeneration heat pump installations (CHPI) and peak sources of heat (PSH) for forming energy-efficient competence of specialists on efficient use of energy supply systems with cogeneration heat pump installations. In this paper the generalization of scientific results from our research was conducted in order to generalize the recommendations for a comprehensive assessment of the energy-ecological-economic efficiency of ESS with CHPI at different power levels and PSH, which allow for a well-founded definition of high-energy efficient, environmentally safe and economically substantiated modes of operation of the ESS with CHPI, taking into account the integrated influence of: the levels of power of ESS and CHPI, the variables of the operation modes of ESS and its elements (CHPI and PSH), the levels of energy efficiency of ESS elements, refrigerants, sources of drive energy of the CHPI and the topological composition of the ESS, taking into account energy losses in the process of generation, supply and transformation of electric energy in CHPI and ESS.*

Introduction

The formation of energy-efficient competence of specialists involves the use of modern energy-saving technologies with the use of modern high-performance equipment. The idea of forming energy-efficient competence of specialists is focused on solving the problem of training modern specialists who are capable of ensuring a rational energy use of energy systems and objects with the highest energy and economic efficiency and environmental safety at a high professional level.

In our study we propose the methodical fundamentals, based of our investigations [1 – 26], for application of the method of complex assessment of energy-ecological-economic efficiency of energy supply systems with cogeneration heat pump installations and peak sources of heat for forming energy-efficient competence of specialists on efficient use of energy supply systems with cogeneration heat pump installations.

Taking into consideration the importance of energy and resource saving and increase of energy usage efficiency in heat and power supply systems, in recent years a number of papers was devoted to the problems, studying energy and economic efficiency of ESS with CHPI [1 – 13], numerous studies, aimed at development of the methods of energy and energy-economic efficiency of combined CHPI application in thermal schemes of energy supply systems were carried out. In [2 – 9] the number of investigation of assessment of energy and economic efficiency of energy supply systems on the base of steam compressor heat pump installations (HPI) and cogeneration heat pump installations were carried out. In [2 – 3, 13 – 19] high energy efficiency of energy supply systems with CHPI has been proved.

In research [4, 8] methodical fundamentals of energy-economic efficiency assessment of energy supply systems with CHPI of different power levels and peak sources of heat, with the account of complex impact of variable operation modes of ESS, peak sources of heat in ESS, sources of CHPI drive energy and with the account of energy losses in the process of generation, supply and conversion of electric energy, are suggested.

Energy supply systems with cogeneration heat pump installations and peak sources of heat provide high indices of energy efficiency on conditions of high efficient operation modes, determined in a number of home and foreign publications [14 – 20], can be two times more efficient than conventional sources of energy supply, based on high efficient electric and fuel-fired boilers.

In recent years a number of papers were devoted to the problems, studying energy, economic and ecological efficiency of ESS with CHPI [1 – 13]. In [2 – 7] the number of investigation of assessment of energy and economic efficiency of energy supply systems on the base of steam compressor heat pump installations (HPI) and cogeneration heat pump installations were carried out. In research [4, 8] methodical fundamentals of energy-economic efficiency assessment of ESS with CHPI of different power levels and peak sources of heat, with the account of complex impact of variable operation modes of ESS, peak sources of heat in ESS, sources of CHPI drive energy and with the account of energy losses in the process of generation, supply and conversion of electric energy, are suggested.

1. Methodical fundamentals of complex assessment of energy-ecological-economic efficiency of energy supply systems with cogeneration heat pump installations and peak sources of heat

In our research [9] methodical fundamentals for complex assessment of energy-ecological-economic efficiency of ESS with CHPI (with the drive from gas-piston engine (GPE)) of various power levels and peak sources of heat (for instance, hot-water fuel-fired boiler, electric boiler, solar collectors, etc.) are suggested. Schemes of the studied ESS with CHPI are presented in [1, 21]. Application of the above-mentioned ESS has a number of energy advantages, as it is mentioned in the publications [1 – 2]. Besides energy advantages, application of ESS with CHPI stipulates the reduction of environmental pollution (including

thermal) and decrease of harmful emissions in the atmosphere. Cogeneration drive of HPI compressors in ESS can be provided on the base of gas engine-generators, manufactured by Ukrainian enterprises: «Pervomayskdizelmash» and SE «V. O. Malyshev plant». Methodical fundamentals for assessment of energy and energy-economic efficiency of ESS with CHPI and PSH are suggested in the research [2, 4, 8].

In [4] indices of energy-economic efficiency of ESS on the base of combined CHPI and PSH are substantiated in order to determine energy efficient and economically substantiated operation modes of ESS on the base of combined CHPI and PSH, with the account of complex impact of variable operation modes, sources of drive energy for steam compressor HPI, with the account of energy losses in the process of generation, supply and conversion of electric energy.

As it is noted in the papers [2, 4, 8], energy efficiency of ESS is greater determined by optimal distribution of loading among ESS elements: cogeneration heat pump installation and peak source of heat (for instance, hot-water fuel-fired boiler, electric boiler, solar collectors, etc.) within ESS and energy efficiency levels of these elements of ESS. Optimal distribution of heat loading among ESS elements can be determined by the loading share of CHPI within ESS β [2, 4, 8], it equals the ratio of CHPI thermal power (with the account of the capacity of waste treating equipment of CHPI cogeneration drive on the base of the study [2]) and ESS.

In our studies [2, 4, 8] energy efficiency of the system «Source of drive energy of ESS – ESS – heat consumer from ESS» is analyzed on the example of ESS based on steam compressor HPI with cogeneration drive and peak sources of heat, with the account of energy losses in the process of generation, supply and conversion of electric energy to HPI and PSH in order to determine energy efficiency and economically substantiated ESS operation modes. In [2, 4, 8] it is suggested to perform comprehensive assessment of energy efficiency of ESS with CHPI and PSH according to complex dimensionless criterion of ESS K_{ESS} energy efficiency, that takes into consideration dimensionless criteria of energy efficiency of CHPI K_{CHPI} and PSH K_{PSH} and distribution of heat loading among these elements of ESS.

Dimensionless criterion of energy efficiency of steam compressor CHPI K_{CHPI}, suggested and substantiated in [2 – 3], was obtained on the base of energy balance equation for the system «Source of drive energy of CHPI – CHPI – heat consumer from CHPI» with the account of the impact of drive energy sources of steam compressor CHPI and with the account of energy losses in the process of generation, supply and conversion of electric energy to CHPI.

Dimensionless criterion of energy efficiency of electric boiler as peak source of heat within ESS K_{PSH}, suggested in the research [2], was obtained on the base of energy balance equation for the systems «Source of electric energy – electric boiler – heat consumer from ESS» with the account of the impact of energy sources for peak electric boiler and with the account of energy losses in the process of generation and supply of electric energy to electric

boiler. Dimensionless criterion of energy efficiency of hot-water fuel-fired boiler as peak source of heat within ESS $К_{PSH}$, suggested in the research [2], was determined on the base of energy balance equation for the systems «Sources of electric energy and fuel – fuel-fired boiler – heat consumer from ESS» with the account of the impact of energy sources for peak fuel-fired boiler and with the account of energy losses in the process of generation and supply of electric energy to the boiler.

According to the research [2], for the cases of alternative peak sources of heat usage in ESS (for instance, solar collectors for ESS with CHPI of small capacity) the value of dimensionless criterion of PSH energy efficiency in ESS $К_{PSH}$ will equal the efficiency factor of alternative peak source of heat η_{APSH} or the efficiency factor of supplementary system with alternative peak source of heat η^{s}_{APSH}.

Complex dimensionless criterion of ESS energy efficiency $К_{ESS}$, suggested in the research [2, 4], is used for the selection of the most efficient PSH for certain kind of ESS with CHPI. In the research [2] it is noted that complex dimensionless criterion of ESS energy efficiency $К_{ESS}$ is used for the selection of the most efficient PSH for certain kind of ESS with CHPI. In [2] it is noted that complex dimensionless criterion of ESS energy efficiency $К_{ESS}$ is used for the selection of the most efficient peak source of heat for certain kind of ESS with CHPI and energy efficient operation modes of the given ESS on condition $К_{ESS} > 1$.

In the research [4] it is suggested to perform the comprehensive assessment of ESS energy-economic efficiency on the base of CHPI and PSH by complex generalized dimensionless criterion of energy-economic efficiency of ESS with CHPI and PSH that has the form:

$$К^{en.ec.}_{ESS} = К_{ESS} + \Delta E^{ESS}_{i} = (1-\beta)\cdot К_{PSH} + \beta \cdot К_{CHPI} + \Delta E^{ESS}_{i}, \quad (1)$$

where ΔE^{ESS}_{i} – is relative economic efficiency (in shares) for ESS on the base of CHPI and PSH for *i*-th operation mode of ESS, that is determined in the following manner:

$$\Delta E^{ESS}_{i} = \frac{(E_{SH})_i - (E_{ESS})_i}{(E_{SH})_i}, \quad (2)$$

where $(E_{SH})_i$ – are operation costs for *i*-th operation mode of the substituted source of heat (SH), $(E_{ESS})_i$ – are operation costs for *i*-th operation mode of ESS.

As it is noted in [4, 8], economically efficient operation modes of ESS with CHPI will

be provided on condition $\Delta E_i^{ESS} > 0$. Energy efficient and economically substantiated operation modes of ESS with combined CHPI and PSH will be provided on condition $K_{ESS}^{en.ec.} > 1$, according to [4, 8]. As it is noted in [4, 8], the greater is the value of $K_{ESS}^{en.ec.}$ index, the more energy efficient, economically efficient and competitive ESS with CHPI and PSH will be.

Methodical fundamentals for energy efficiency assessment of ESS with CHPI and PSH are presented in the studies [2, 3, 5 – 7, 12, 13, 22]. Methodical fundamentals for energy-economic efficiency assessment of ESS with CHPI and PSH are presented in the studies [4, 8]. Methodical fundamentals for assessment of energy-ecological efficiency of ESS with CHPI and PSH (specific case of ESS with CHPI – heat pump plant) on natural and industrial sources of heat on condition of variable operation modes are presented in the study [23]. Methodical fundamentals for assessment of energy, ecological and economic aspects of ESS with CHPI and PSH efficiency (specific case of ESS with CHPI – heat pump plant) on natural and industrial sources of heat are suggested in the research [24 – 25].

It should be noted that in the studies [23 – 25] comprehensive investigations, aimed at assessment of energy-ecological-economic efficiency of ESS with CHPI of various power levels and PSH, with the account of complex impact of variable operation modes of ESS, peak sources of heat in ESS, sources of drive energy of CHPI and with the account of energy losses in the process of generation, supply and conversion of electric energy, have not been performed.

In our study [9] it is suggested to perform the comprehensive assessment of energy-ecological-economic efficiency of ESS on the base of CHPI and PSH according to complex generalized dimensionless criterion of energy-ecological-economic efficiency of ESS with CHPI and PSH:

$$K_{ESS}^{compl.} = K_{ESS} + \Delta E_i^{ESS} + \Delta EC_i^{ESS} = (1-\beta)\cdot K_{PSH} + \beta \cdot K_{CHPI} + \Delta E_i^{ESS} + \Delta EC_i^{ESS}, \quad (3)$$

where ΔEC_i^{ESS} – is relative ecologic efficiency (in shares) for ESS on the base of CHPI and PSH for *i*-th operation modes of ESS, that is determined in the following manner:

$$\Delta EC_i^{ESS} = \frac{(EC_{SH})_i - (EC_{ESS})_i}{(EC_{SH})_i}, \quad (4)$$

where $(EC_{SH})_i$ – is the amount of harmful emission in the atmosphere for *i*-th operation mode of the substituted source of heat, $(EC_{ESS})_i$ – is the amount of harmful emission in the atmosphere for *i*-th operation mode of ESS with CHPI and PSH.

As it is noted in [9], the index of relative ecological efficiency of ESS with CHPI and PSH ΔEC_i^{ESS} assesses the decrease of harmful emissions in the atmosphere (in shares) as a result of application of ESS with CHPI and PSH for *i*-th operation mode of ESS as compared with the operation of alternative substituted source of heat energy. Harmful emissions in the atmosphere during burning of fuel in boilers as well as harmful emissions during the generation of electric energy at power plants or in the source of CHPI drive energy were taken into account.

As it is noted in the study [2], energy efficient operation modes of ESS with CHPI and PSH will be provided if $K_{ESS} > 1$. As it is noted in studies [4, 8] economically efficient operation modes of ESS with CHPI and PSH will be provided if $\Delta E_i^{ESS} > 0$. In our research [9] it is determined that ecologically safe and efficient operation modes of ESS with CHPI and PSH will be provided if $\Delta EC_i^{ESS} > 0$. The above-mentioned indices of various aspects of the efficiency of ESS with CHPI and PSH are also used for the selection of the most efficient peak source of heat for certain kind of ESS with CHPI and energy-ecologically-economic efficient operation modes of the above-mentioned ESS if $K_{ESS} > 1$.

Ecologically safe, energy efficient and economically substantiated operation modes of ESS with combined CHPI and PSH will be provided on condition $K_{ESS}^{compl.} > 1$, according to [9]. The greater is the value of $K_{ESS}^{compl.}$ index, the more energy efficient, ecologically safe, economically efficient and competitive ESS with CHPI and PSH will be.

The suggested in [9] methodical fundamentals for comprehensive assessment of energy-ecological-economical efficiency of ESS with CHPI and PSH have a number of advantages:

– it take into account energy efficiency and power levels of ESS elements;

– they take into account operation modes of steam compressor HPI;

– take into account energy efficiency of PSH in ESS and the kind of the consumed energy, with the account of energy losses in the process of generation and supply of energy to PSH and ESS;

– take into account ecological efficiency of PSH in ESS and the kind of the consumed energy, with the account of energy losses in the process of generation and supply of energy to PSH and ESS;

– take into account energy efficiency of variable operation modes of ESS with the change of load distribution between steam compressor CHPI and PSH in ESS;

– these methods enable to assess the comprehensive impact on energy, ecological and economic efficiency of ESS with CHPI and PSH of such factors: variable operation modes of ESS, peak sources of ESS heat, sources of drive energy of steam compressor CHPI with the account of energy losses in the process of generation, supply and conversion of electric energy in CHPI and ESS;

– enable to assess comprehensively energy-ecological-economic efficiency of the greater part of variants of ESS with CHPI and PSH on conditions of variable operation modes;

– they can be used for the selection of the most energy efficient, ecologically safe and economically substantiated PSH for certain type of ESS;

– suggested in [9] methodical fundamentals can be used for comprehensive assessment of energy-ecological-economic efficiency of ESS with PSH and CHPI with different refrigerants, sources of low temperature heat and scheme solutions of HPI.

2. Application of the method of complex assessment of energy-ecological-economic efficiency of energy supply systems with cogeneration heat pump installations and peak sources of heat

Substantiation of the method of complex assessment of energy-ecological-economic efficiency of energy supply systems with cogeneration heat pump installations and peak sources of heat that has profound approach to the assessment of energy transformations in ESS elements is presented in [11]. The given method enables to provide the grounded definition of high energy efficient, ecologically safe and economically substantiated operation modes of ESS with CHPI and PSH on conditions of different variables: operation modes of ESS and its elements, levels of energy efficiency of ESS elements, refrigerants, sources of drive energy and topological composition of ESS. On the base of the results of the research [11] the impact of the components of energy, economic efficiency and ecological safety on the value of the complex index of energy-ecological-economic efficiency of ESS with CHPI and PSH is illustrated.

In study [11] the impact of the components of energy efficiency, economic efficiency and ecologically safety of ESS with CHPI and PSH on the value of the generalized complex index of energy-ecological-economic efficiency was illustrated on the example of ESS with CHPI, using the heat of sewage, and peak gas-fired boiler.

The efficiency of the above-mentioned ESS in [11] is determined for the change of CHPI load share within the limits of $\beta = 0{,}1\ldots1{,}0$. The results of the study are given for energy efficient operation modes of CHPI with $К_{CHPI}$ =1,1…2,1 (on conditions of maximum efficiency of gas-piston engine) on the base of studies [14 – 20] results, that correspond to real coefficient of performance of CHPI within the limits of φ_r = 2,7…5,4 for CHPI of large capacity, according to [2].

Fig. 1 (from [11]) shows the area of energy efficient operation of ESS, determined for the modes of high efficient operation of CHPI. This area is determined by the index of efficient operation of ESS with CHPI and PSH from the formula (3) on conditions of maximum efficiency of GPE and peak fuel-fired boiler, without the account of two last components that take into consideration economic and ecological efficiency. This area is determined on the conditions of high efficient operation of CHPI with $К_{CHPI}$ =1,7…2,1 and the change of CHPI loading share in ESS within the limits of $\beta = 0{,}125\ldots1{,}0$.

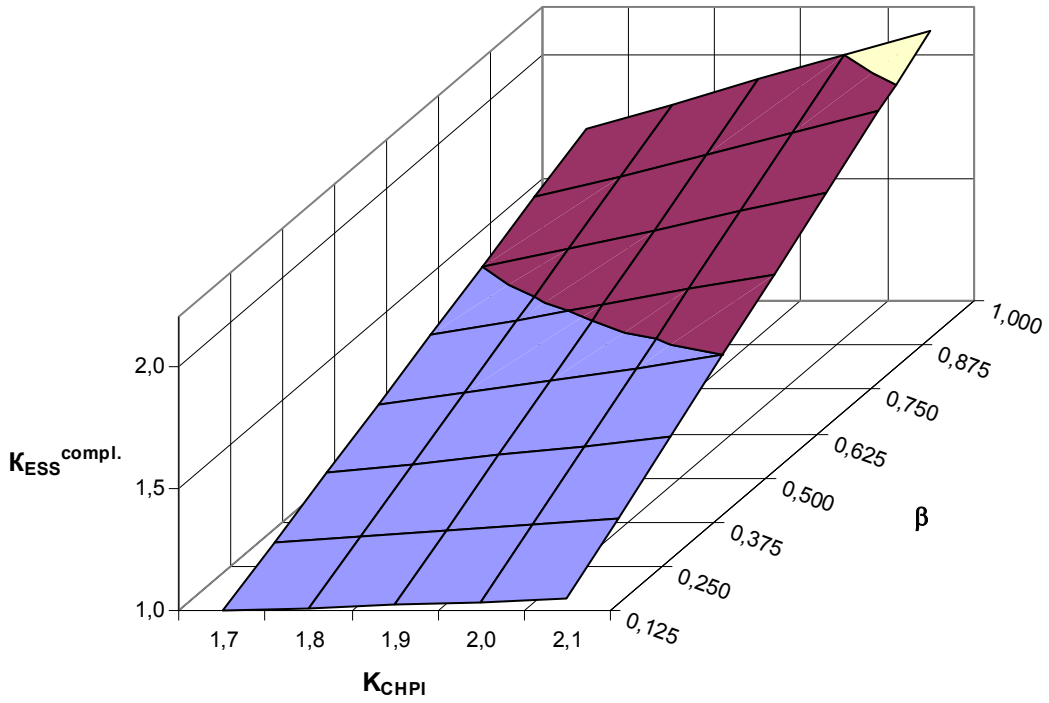

Fig. 1. Area of the energy efficient operation of ESS, determined for the modes of high efficient operation of CHPI by the efficiency index of ESS with CHPI and PSH without the account of the components, taking into consideration economic and ecological efficiency [11]

For the results of the research, shown in Fig. 1, according to [3], such indices of ESS equipment are taken into consideration: value of GPE efficiency factor $\eta_{EM} = 0{,}42$; the value of the electric motor efficiency with the account of energy losses in the control unit $\eta_{ED} = 0{,}8$. As the PSH fuel-fired boiler house with $\eta_{FB} = 0{,}9$ is provided in ESS. The value of the dimensionless criterion of fuel-fired boiler energy efficiency, according to [2], is $K_{PSH}^{FB} = 0{,}9$. The dependence, shown in Fig. 1, is determined on condition of $K_{ESS} > 1$ [11].

Fig. 2 (from [11]) shows the area of energy efficient operation of ESS, determined for high efficient operation modes of CHPI, by efficiency index of ESS with CHPI and PSH from the formula (3), on conditions of maximum efficiency of GPE and peak fuel-fired boiler with the account of the component, that takes into consideration ecological efficiency and without the consideration of the component, that takes into account economic efficiency. To evaluate the relative ecological efficiency of ESS with CHPI and PSH, gas-fired boiler house of corresponding power was provided as the alternative source of heat [9]. This area is determined on the conditions of high efficient operation of CHPI with $K_{CHPI} = 1{,}7\ldots2{,}1$ and CHPI loading share change in ESS within the limits of $\beta = 0{,}125\ldots1{,}0$.

Dependence, shown in Fig. 2, is determined on the condition of $K_{ESS} > 1$. As compared with the similar dependence in Fig. 1, in Fig. 2 the impact of ecological efficiency component on the value of the index of energy-ecological-economic efficiency in ESS can bee seen.

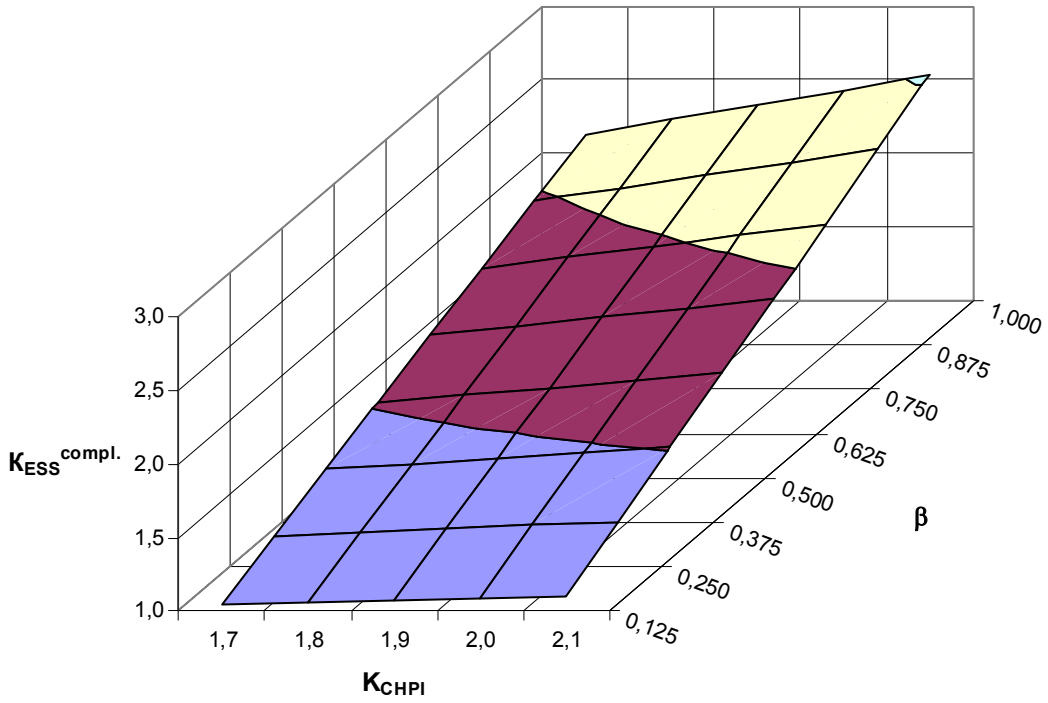

Fig. 2. Area of energy efficient operation of ESS, determined for the high efficient operation modes of CHPI by the efficiency factor of ESS with CHPI and PSH, with the account of the component that takes into account ecological efficiency and without the account of the component, taking into account economic efficiency [11]

Fig. 3 shows the area of energy efficient operation of ESS, determined for CHPI high efficient operation modes, by the efficiency index of ESS with CHPI and PSH from the formula (3), on conditions of maximum efficiency of GPE and peak fuel-fired boiler with the account of the component, that takes into consideration economic efficiency and without the account of the component, that takes into consideration ecological efficiency. This area is determined on the conditions of high efficient operation of CHPI with K_{CHPI} =1,7…2,1 and contracted range of CHPI load share change in ESS within the limits of β = 0,125…1,0.

Dependence, shown in Fig. 3, is determined on the condition of $K_{ESS} > 1$. As compared with the similar dependences in Fig. 1, in Fig. 3 the impact of the component of economic efficiency on the value of energy-ecological-economic efficiency of ESS index can bee seen. Method of complex assessment of energy-ecological-economic efficiency of energy supply systems with cogeneration heat pump installations and peak sources of heat, suggested in the study [9], substantiates profound approach to the assessment of energy transformations in the elements of ESS, that enables to provide the substantiated determination of high energy efficient, ecologically safe and economically grounded operation modes of ESS with CHPI and PSH on conditions of the following variables: operation modes of ESS and its elements, levels of energy efficiency of ESS elements, refrigerants, sources of drive en energy and topological composition of ESS.

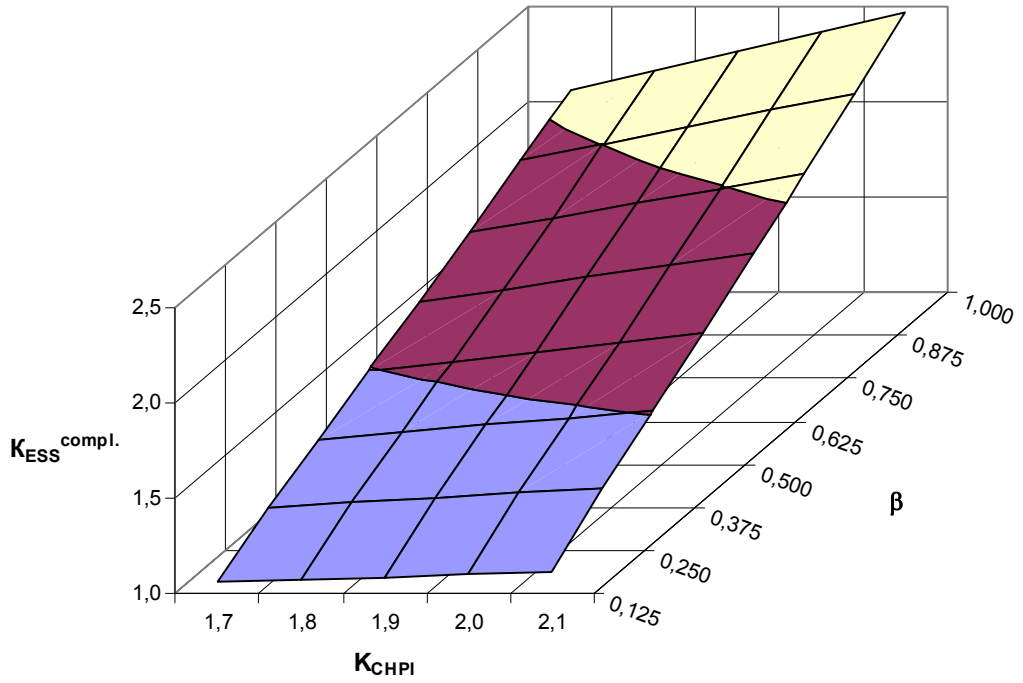

Fig. 3. Area of energy efficient operation of ESS, determined for high efficient operation modes of CHPI by the efficiency index of ESS with CHPI and PSH, with the account of the component that takes into consideration economic efficiency and without consideration of the component, that takes into consideration ecological efficiency [11]

The research [26] contains the examples of application of the method of complex assessment of energy-ecological-economic efficiency of ESS with PSH and small power CHPI, using the heat of sewage. Efficiency of ESS with steam compressor HPI of small power with cogeneration drive from gas-piston engine-generator was studied. Electric or fuel-fired boiler houses were provided to be used as peak sources of heat in ESS. The investigated ESS can completely or partially provide auxiliary needs in electric energy and provide the consumers needs in heating and hot water supply. Schemes of the ESS with CHPI and PSH are presented in works [1, 21].

Methodical fundamentals for energy, ecological and economic efficiency assessment of ESS with CHPI and PSH are presented in the studies [4 – 10]. Methodical fundamentals for assessment of energy, ecological and economic aspects of ESS efficiency with CHPI on natural and industrial sources of heat are suggested in the research [22, 23, 25]. Principles for selection of the areas of energy-ecological-economic efficiency of ESS with CHPI and PSH are presented in the study [10]. Application of the suggested in [9] methodical fundamentals for comprehensive assessment of energy-ecological-economic efficiency of ESS with CHPI and PSH was demonstrated on the specific examples in publication [26].

Figs. 4 and 5 (from [26]) show the results of complex assessment of energy-ecological-economic efficiency of ESS with CHPI and PSH. In our research [26] the values of the dimensionless criterion of energy-ecological-economic efficiency of ESS with of CHPI and PSH are determined on conditions of CHPI loading share change in the range of $\beta = 0{,}1 \ldots 1{,}0$.

The study was carried out for energy efficient operation modes of CHPI with K_{CHPI} =1,1…2,1 (on conditions of maximum efficiency of GPE) and with K_{CHPI} =1,1…1,6 (on conditions of minimum efficiency of GPE), on the base of the research results [2, 3].

Fig. 4 shows the area of energy-economical efficient and ecologically safe ESS operation, using the heat of sewage, with CHPI of small power and peak electric boiler with the consumption of electric energy from CHPI.

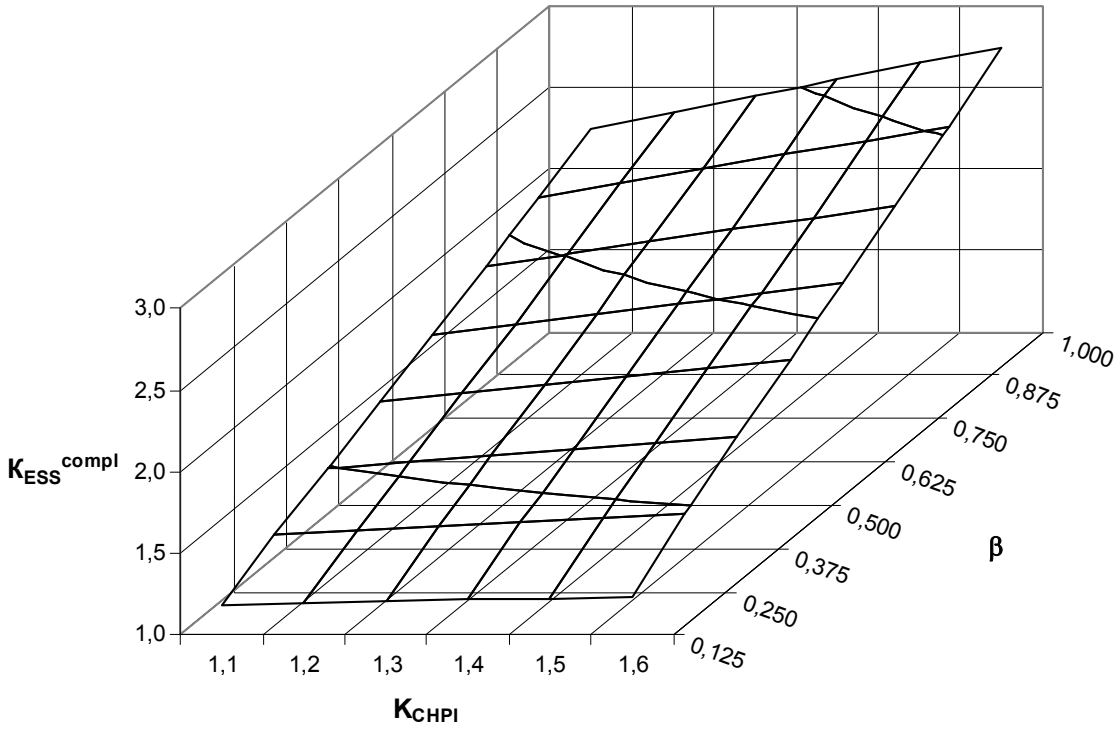

Fig. 4. Area of energy-economical efficient and ecologically safe operation of ESS, using the heat of sewage, with CHPI of small power and peak electric boiler, on conditions of minimal efficiency of GPE and peak electric boiler and consumption of electric energy from CHPI [26]

This area is determined by the index of energy-ecological-economic efficiency of ESS with CHPI and PSH from the formula (3) on conditions of minimal efficiency of GPE and peak electric boiler. In our research [26], according to [2, 3], the following values are taken into account: value of GPE efficiency factor $\eta_{EM} = 0{,}31$, value of electric motor efficiency with the account of energy losses in the control unit of the motor $\eta_{ED} = 0{,}8$. Electric boiler house with $\eta_{EB} = 0{,}9$ is provided to be peak source of heat in ESS. The value of dimensionless criterion of electric boiler energy efficiency in case of electric energy consumption from CHPI, according to [2], is $K_{PSH}^{EB} = 0{,}223$. In order to assess the relative ecological efficiency of ESS with CHPI and PSH as the alternative source of heat the electric boiler house of corresponding power was provided in this case.

As it is seen from Fig. 4, on conditions of: $K_{CHPI} > 1{,}1$ and $\Delta E_i^{ESS} > 0$ and $\Delta EC_i^{ESS} > 0$ and $K_{ESS}^{compl.} > 1$, dependence, shown in Fig. 4, determine the area of energy-economical efficient and ecologically safe operation of ESS, using the heat of sewage, with CHPI of small power and peak electric boiler, on conditions of minimum efficiency of GPE and electric boiler and consumption of electric energy from CHPI [26].

Fig.5 shows the area of energy-economical efficient and ecologically safe operation of ESS, using the heat of sewage water, with CHPI of small power and peak gas-fired boiler. This area is defined by the index of energy-ecological-economic efficiency of ESS with CHPI and PSH from the formula (3) on conditions of maximum efficiency of GPE and peak fuel-fired boiler. In our research [26], according to [2, 3], the following values are taken into account: value of GPE efficiency factor $\eta_{EM} = 0{,}42$ and value of electric motor efficiency with the account of energy losses in the control unit of the motor $\eta_{ED} = 0{,}8$. Fuel-fired boiler house with $\eta_{FB} = 0{,}9$ is provided by peak source of heat in ESS. The value of dimensionless criterion of fuel-fired boiler energy efficiency, according to [2], is $K_{PSH}^{FB} = 0{,}9$. In order to assess the relative ecological efficiency of ESS with CHPI and PSH the gas-fired boiler house of corresponding power was provided as the alternative source of heat in this case.

As it is seen from Fig. 5, on conditions of: $K_{CHPI} > 1{,}1$ and $\Delta E_i^{ESS} > 0$ and $\Delta EC_i^{ESS} > 0$ and $K_{ESS}^{compl.} > 1$, dependence, shown in Fig. 5, determine the area of energy-economical efficient and ecologically safe operation of ESS, using the heat of sewage, with CHPI of small power and peak fuel-fired boiler, on conditions of maximum efficiency of GPE and fuel-fired boiler [26].

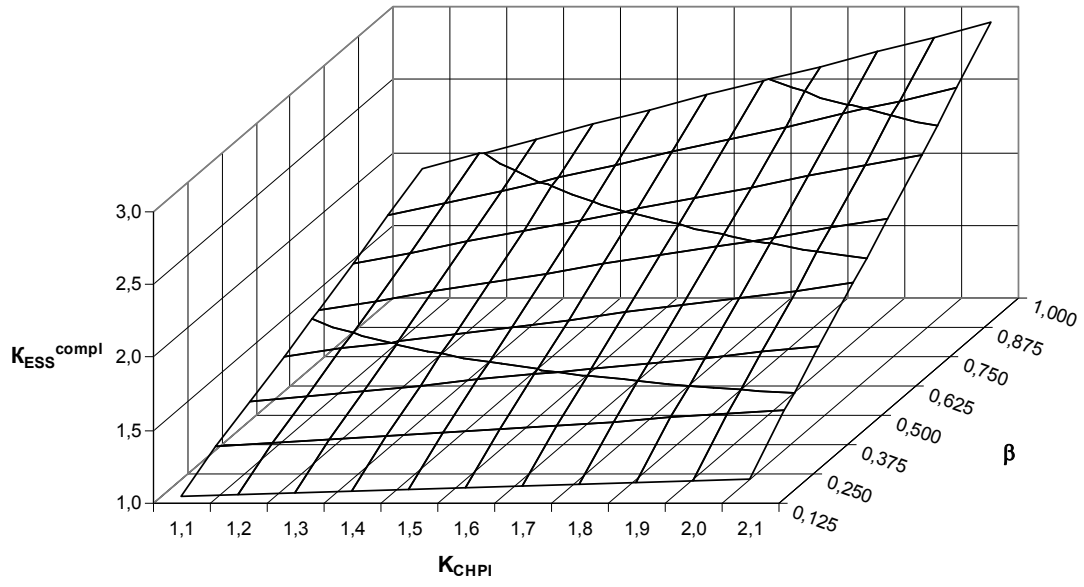

Fig. 5. Area of energy-economical efficient and ecologically safe operation of ESS, using the heat of sewage, with CHPI of small power and peak fuel-fired boiler, on conditions of maximum efficiency of GPE and peak fuel-fired boiler [26]

Under conditions: $К_{CHPI} > 1{,}1$ and $\Delta E_i^{ESS} > 0$ and $\Delta EC_i^{ESS} > 0$ and $К_{ESS}^{compl.} > 1$, the above-mentioned ESS can be recommended as energy-economical efficient and ecologically safe ESS. This ESS can be competitive with modern high efficient electric and fuel-fired boilers in the systems of heat and energy supply.

The suggested in studies [4 – 11] methodical fundamentals allow to determine the areas of high energy-economic efficiency and ecologically safe operation of ESS with CHPI and PSH and develop recommendations of high efficient operation of ESS with CHPI and PSH. For practical application of the suggested in studies [4 – 11] methodical fundamentals for comprehensive assessment of energy-ecological-economic efficiency of different variants of ESS with CHPI and PSH, we propose to use the results, obtained in the research [1 – 13, 22, 23, 25, 26].

Conclusions.

In our study we propose the methodical fundamentals, based of our investigations [1 – 26], for application of the method of complex assessment of energy-ecological-economic efficiency of energy supply systems with cogeneration heat pump installations and peak sources of heat for forming energy-efficient competence of specialists on efficient use of energy supply systems with cogeneration heat pump installations.

In our study, a generalization of scientific results from our research [1 – 26] was conducted in order to generalize the recommendations for a comprehensive assessment of the energy-ecological-economic efficiency of ESS with CHPI at different power levels and PSH, which allow for a well-founded definition of high-energy efficient, environmentally safe and economically substantiated modes of operation of the ESS with CHPI, taking into account the integrated influence of: the levels of power of ESS and CHPI, the variables of the operation modes of ESS and its elements (CHPI and PSH), the levels of energy efficiency of ESS elements, refrigerants, sources of drive energy of the CHPI and the topological composition of the ESS, taking into account energy losses in the process of generation, supply and transformation of electric energy in CHPI and ESS.

The suggested methodical fundamentals allow to determine the areas of high energy-economic efficiency and ecologically safe operation of ESS with CHPI and PSH and develop recommendations, concerning high efficient operation of ESS with CHPI and PSH. For practical application of the suggested methodical fundamentals for comprehensive assessment of energy-ecological-economic efficiency of different variants of ESS with CHPI and PSH, we propose to use the results, obtained in the studies [1 – 20, 22 – 26].

The research contains the examples of application of the method of complex assessment of energy-ecological-economic efficiency of ESS with PSH and CHPI. This method has in-depth approach to the assessment of energy transformations in ESS elements and enables to provide the substantiated determination of high energy efficient, ecologically safe and economically substantiated operation modes of ESS with CHPI and PSH.

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FAMILISTIC PREPARATION OF A FUTURE TEACHER

Abstract. *The article is dedicated to the relevant issue of familistic preparation of a future teacher of general academic school. The notion of "familistic competence" is introduced for first time. The main constituents of this integral characteristic of a modern teacher are analyzed. The results of the study ascertained that theoretical knowledge, psychological attitude and practical readiness of general academic school teachers and alumni of pedagogical institutions in the issues of gender, marriage, family and intersexual communication are on a very low level. The authors' vision of the ideal model of familistic preparation in pedagogical institution is presented. The content component of familistic preparation of a teacher is analyzed as well as technological tool for the implementation of the content. The familistic potential of educational subjects of pedagogical university, possibilities of extra-curricular work and pedagogical practice of future teachers' preparation to pre-marital pupils' education are investigated. Presented mathematical calculations prove the efficiency of experimental work carried out by the authors.*

Introduction

Sociological and pedagogical researches of the youth preparation to family life have ascertained the serious transformations of marriage and family relations: prioritizing by the youth the extra familial relations; increase number of one-parent families; lack of special knowledge about formation and functioning of the institution of the family; lack of awareness of family relations significance in social and professional development of the individual; decrease of the population and low stability of marriage-family relations; increase in divorce rate and extra-marital birth; loss of prestige of motherhood; loosening of the system of behavior norms in the family, marriage and traditional assumptions about sex role; dissatisfaction of many families about emotional and psychological climate in a family; distribution of asocial manifestations in the families.

Sociologists-familiologists draw a pessimistic picture of a family in a near future which is characterized as unstable with weak paternity-marriage-family ties; with extreme decrease of childbirth; destruction of continuity of older and younger generations of the family; decrease in number of so called secured families; increase in number of one-parent families, etc. Marriage loses its role as a normative regulator of sexual interaction. As a result, the marriage ceases to be an unconditional norm, which defines the standard of behavior.

Often marriage does not precede sexual intimacy but it affirms; normative marriage pattern is substituted by a wide variety of life styles and alternative marriage patterns; low control over pre-marital sexual youth behavior, liberalization of sexual moral causes the tendency of reducing the age for sexual life beginning, though the average age for marriage is increasing. Based on the modern family analysis we can say that this was the result of negligent attitude towards the issue of pre-marital youth preparation. In fact, the presentation of even senior pupils about their future family is egocentric and locally situational in nature, which is a consequence of spontaneous formation of the family image during childhood and adolescence. Young people don't have the most important household skills, there is a lack of readiness for conscious paternity, there is a lack of understanding of the psychological characteristics of the genders, there is a sexual ignorance etc. Practical pre-marital preparation through educational curricula in Ukraine has not started yet. Suchomlynskyi said: "It seems to me that the high school doesn't do the main thing that it has to do – does not teach to live" [1: 245].

The situation with the issue of *popular science literature* on marriage-family and sexual topics for teachers, parents and particularly for the pupils of different ages is not better. Unfortunately, very often popular science books and articles that arise issues of sexual education of students and prepare them for family life are written by urologists, gynecologists and sometimes venerologists etc.

Insufficient development of the problem of preparing students to the family life *in the home scientific researches* makes it relevant. The analysis of sociological, psychological and pedagogical literature makes it possible to conclude that the boom of interest in marriage-family subjects was at the end of the 20-th century. Despite the fact that the study of the institute of the family was carried out at the junction of such subjects as philosophy, sociology, demography, economics, jurisprudence, psychology, pedagogics, medicine, physiology, genetics, ethnography, ethics, history, the holistic, integrative approach to solving this complicated interdisciplinary problem was not realized, because each of these sciences considers its aspect.

However, in many works of that period, there was accumulated a wealth of empirical and theoretical material reflecting various aspects of marriage and family (Boyko O., Vievska M., Hlavatska O., Hovorun T., Kikinezhdy O., Kravchenko T., Lutsyk D., Mezeriya I., Postovyi V., Rybalka O., Yatsenko L., and others). Unfortunately, today, despite the significant transformation of marital and family relations, the intensity of scientific research has fallen sharply today.

There are no fundamental work on the generalization of national experience of youth preparation to family life and comparative and pedagogical analysis of the problem under investigation in foreign countries. That is why today there is a need to create a multifaceted comprehensive family science - *familistics*, which has to overcome this disunity of researchers.

Taking into consideration the negative trends in the family formation, the shortcomings in the pre-marital education of schoolchildren, ignoring by pedagogical educational institutions the problems of preparing future teachers for work on the formation of a future family person, as well as the lack of fundamental theoretical and methodological developments of the problem of preparing students for family life, the theme of our research has been chosen.

Taking into account the above, in the beginning of the XXI century the familistic competence of the teacher becomes very important. Its absence usually results in the reproduction of social prejudices, gender discrimination, unreadiness of school graduates for adult life in general and a healthy family in particular, and so on.

If the hospitals treated people based on quackery, if the factories and universities were managed without special training, at the level of ignorance - chaos and devastation would quickly reign around everywhere. And family life goes on at exactly the same level. *Just think*, - wrote Sukhomlynskyi, -: *not everyone are to be physicists and mathematicians, but everyone will become parents, husband or wife*» [2:381].

1. Familistic competence of the teacher and the main components of the process of its formation

Under the familistic competence of the teacher, we will understand the systemic education of the personality of the teacher integrating knowledge of the basics of familistics, the need and ability to apply them in practical pedagogical activities, the ability to solve the tasks of this activity at a high professional level, the desire for self-education in this sphere. This is a relatively autonomous subsystem in the system of professional competence of the teacher and his personality in general and includes: *the social component* (readiness of the individual for family life); *socio-pedagogical component* (interaction of teachers with families of their students, with the public to increase the efficiency of the process of preparing students for family life); *professional pedagogical component* (teacher's willingness to prepare students for family life); *person-transforming component* (self-improvement of personality as a family man and a teacher).

Familistic readiness of the future teacher is a qualitative characteristic of his professional culture, due to the mutual influence of the five structural components: professionally significant personal qualities, motivational, cognitive, emotional, volitional, and operational. In order to determine the level of vocational readiness of the teacher, we made an assessment that covered 120 teachers of secondary schools of Ternopil region and 650 graduate students of different faculties of the Ternopil National Pedagogical University. Different research methods were used: surveys, testing, ranking, self-estimation and the opinion of "competent individuals". The assessment was conducted in accordance with the criteria we set out for the teacher's professional readiness to work on preparing students for family life [3: 648-654]

At the second stage, there was *an assessment of the level of psychological readiness* of teachers and students to work on preparing pupils for family life, especially to sexual education and organization of interpersonal communication. At the same time, the method of self-rating was used with the additional involvement of other, more specific, methods. The results of the assessment of psychological readiness revealed a lower level for both teachers and graduate students: 64% of students and 48% of teachers showed a low level; 17.5% and 25.6%, respectively, the average level, 18.5% and 26.4% - high level of psychological readiness.

The results of the study showed that the theoretical knowledge of teachers and graduates of the pedagogical educational institution in matters of sex, marriage, family and interpersonal communication was low. Answering the questionnaire, most of them could not precisely differentiate the concept of "preparation for family life", "gender socialization" and “sexual education". They showed weak understanding of the special terminology, could not specify the themes of school subjects, which can be used to prepare pupils for family life and were afraid of questions from pupils of a sexual nature due to lack of orientation in this problem. According to the assessment, the low level of theoretical knowledge was found in 48% of students and 34.2% of teachers, high - respectively 12% and 28.3%.

The level of practical preparedness was determined by two characteristics: activity and competence in solving specific problems of moral and practical content, in role games at laboratory and practical classes and during pedagogical practice. In the course of our study, it was found that most students, the future teachers, are at a low level of readiness for this kind of pedagogical activity.

Thus, the results of experimental work showed that the low level of familistic readiness was characteristic of 78% of students. We attributed this fact to the lack of attention to this type of activity in the preparation of teachers. 61% of teachers pointed out the imperfection of educational curricula in educational institutions. The average level was demonstrated by 17.8% of students and 26.3% of teachers, high - respectively 4.2% and 11.7% of respondents.

The reason for this is the inadequate work of educational institutions in education on this important problem of professional training. Unfortunately, the curricula of pedagogical universities do not foresee mastering the basics of familistics by students - future teachers, although the urgent need for this is obvious. This is weird because in the faculties of social sciences, law and economics, the main familistc research directions are studied. Familistic component of professional and pedagogical competence will ensure the priority of the teacher's training on of the family values, children and family life. It also the most comprehensively reflects the sphere of knowledge about the family, the study of which is necessary for the teacher to work on preparing pupils for family life, interactions with their families, as well as for their own family life. Therefore, it is necessary to design such a pedagogical technology of training, which will be aimed at forming familistic readiness of future teachers.

The importance of familistic competence of the teacher is due to the fact that teachers are the main agents of preparing pupils for family life and have a great influence on the formation of ideas about marital and family relationships, the qualities of men and women, their roles, and professional activity among pupils. Based on the analysis of scientific literature and the results of the study, we attempted to point out the main criteria for the professional readiness of teachers to prepare pupils for their family life, namely the theoretical knowledge, psychological readiness and practical preparedness.

***Theoretical knowledge includes*:** knowledge of gender issues, marriage and family; knowledge of the features of psychosexual development and sexually based behavior of children; understanding of the dynamics of interpersonal communication and communication between genders at different stages of school teaching; awareness of the place of his or her subject and extra-curricular work in the general system of gender socialization and preparation of pupils for family life; knowledge of the basics of the method of pre-marital education, etc.

Psychological readiness includes awareness of the future teacher about the goals, objectives and social necessity of pre-marital preparation of schoolchildren; persistent cognitive interest in the study of gender, familistic and sexual problems, aspiration for self-education in this regard; self-assessment and self-correction of their professional training; understanding of the psychological characteristics of the sexes and the psychology of the spouses relations, including sexual relations; absence of complexes and false shyness among pupils; emotional and volitional preparedness; self-confidence, self-control; a set of psychological methods of studying personality, etc.

The psychological readiness of the teacher to fulfill the tasks of preparing pupils for family life involves the formation of a complex of personal qualities, among which we have identified: 1) individual traits; 2) qualities based on psychological mechanisms; 3) qualities based on pedagogical abilities.

Among the *individual traits* of the future teacher, we pointed out the *emotional sensitivity* (kindness, humanity, ability to feel the pupils mood, his or her perceptual abilities, readiness for help, ability to support emotional communication, ability to cooperate); *sense of delicacy* (benevolent attitude towards the pupils, lack of acutance assessment, attribution, dichotomy, stigmatization); *a sense of humor* (the ability to support the emotional state of students, the ability to inspire pupils to self-improvement); *sense of intuition* (ability to extrapolate pupil behavior, anticipation prediction of the results of certain actions or influences to check their effectiveness in practice), etc.

To the *qualities based on psychological mechanisms*, we attributed the following: *reflection* (the ability to see oneself in the eyes of the pupil); *identification* (the ability to think mentally on the pupil's place and on the basis of awareness of his problems explain his behavior); *empathy* (ability to understand emotional state of the pupil); *decentralization* (the ability to give up his egocentric assessments of the student).

Among the *qualities based on pedagogical abilities*, we pointed out: ***a sense of the object of influence*** (the ability to select the information that causes the greatest emotional response); *feeling of tact* (demanding in conjunction with respect, the ability to encourage, but not to be excessive here, severity, but without patronage, attentiveness with a sense of measure); *sense of measure* (a feeling of change occurring in the individual under the influence of various influences); *sense of guidance*, which helps the teacher to constantly rely on the ability of pupils, take them into account and have ways of transferring pupils to a higher level of development.

Practical preparedness means pedagogical techniques of influence on students; skills in the organization of interpersonal communication; the methods of sexual education, sexual education and pre-marital preparation of schoolchildren; informational, organizational, constructive, gnostic and communicative skills. The practical readiness for the successful implementation of sex education of the students and their preparation for family life requires the teachers to have such skills as:

- *informative:* selection of materials, measures, the most effective for sexual education and pre-marital preparation of students; telling information, proof, use of opportunities of educational subjects for forming in pupils the correct understanding of love, friendship, interpersonal relations, peculiarities of marital life;

- *analytical:* to find in the theory of sexual education and learning the ideas, conclusions, regularities, adequate to the logic of the phenomenon under consideration; to correctly diagnose pedagogical phenomena; find the main pedagogical problem (the problem of sexual education, preparation for family life) and ways of its optimal solvation; to assess the level of sexual education and education on the basis of an adequately selected survey methodology; to observe and analyze the process of pre-marital preparation of schoolchildren, to make concrete recommendations for its improvement, to carry out corrective work on the basis of the analysis of the results obtained and the identification of the causes of the shortcomings in sexual education; to analyze the equipment of the pedagogical process by didactic and visual aids, to give recommendations on creating a subject-developing environment that meets the peculiarities, abilities and interests of children of different sexes.

- *organizational:* to be able to be involved in various types of activities of pupils (cognitive, game, labor, communicative) for the purpose of sexual education; create conditions conducive to the successful implementation of the sexual education process; to choose the most rational forms of work with students, the most effective methods of work depending on the particular pedagogical situation; organize their own pedagogical activity in sexual education; to mobilize a team of children to perform their tasks by personal example, various means and forms; to stimulate the work of students and to help them: to stimulate self-education; to create conditions for the expression of activity, independence, initiative during various activities on the sexual education of students and their preparation

for family life in classes and in extra hours; organize a team for performing educational functions of sexual education as an important part of the pedagogical process;

- *constructive:* to determine the specific purpose and tasks of sexual education and pre-marital preparation, taking into account the age and individual characteristics of the members of the team, ways to achieve the goal; be able to design the development of the personality of the child, a group of children, taking into account gender; be able to predict the development of personality: its personal qualities, feelings, will, behavior, possible deviations in sexual behavior, difficulties in relationships with peers of the opposite sex; to draw up a plan of work on sexual education of pupils and their preparation for family life, to obtain content; to develop a close, middle and long-term goal of sexual education of students; nominate and solve the tasks of pre-marital preparation from the position of an integrated approach; to foresee and plan in advance the relations with children, to implement a system of control and self-control; be able to select the necessary didactic material, children and methodical literature in accordance with the tasks of sexual education, taking into account the age and individual characteristics of children;

- *gnostic:* to understand the essence of sexual education; know basic concepts, terms of sex-oriented socialization, sexual education and pre-marital training; be able to independently acquire knowledge of the problem; to know the individual, age, sexual characteristics of children; to study the personality of the student and the group of the students in order to assess their development and education in the aspect of sexual education; observe, analyze and reflect on personal work, the experience of colleagues and the best teachers on this problem; to foresee the influence of educational forms, means, methods and techniques of sexual education and pre-marital preparation of students;

- *didactic:* to transfer their knowledge to students, to explain the categorical notions of sexual education, the culture of interpersonal relations, marital life; to defend the correctness of their judgments, to help them in assimilating and applying the acquired knowledge in life, to form a high level of awareness of their own behavior, to make productive use of the possibilities of educational material for the sexual education of students; to have verbal and non-verbal means and methods of knowledge and experience transfer; to be able to compose notes for specific classes, conversations, develop didactic games, manage storyline-role games of everyday character; be able to provide advisory assistance to parents, teachers of various subjects, etc .;

- *communicative:* to establish pedagogically-expedient relations with students; to find an individual approach to each student; do not complex when talking about erotic-sexual topics; to properly interact with parents, colleagues in work on this problem; the ability to solve delicate issues, such as personal hygiene, sexual and reproductive health, HIV / AIDS prevention, friendship, dating, harmful habits, etc.; competence, personal comfort on a wide range of issues, in particular familistic, gender and sexual; regulate the relationship between children, resolve conflict situations, switch child's attention; be able to

organize the exchange of professional-significant information on the sexual education of schoolchildren; the ability to refer to relevant sources of specialist knowledge when necessary.

The effectiveness of work on the sexual education of schoolchildren largely depends on the degree of mastering of the teacher of relevant psychological, pedagogical, and special skills. Based on the analysis of psychological and pedagogical literature, the study of experience, we have developed a *model of training future teachers* for the organization of sexual education, sexual education and pre-marital education of students, which is based on an integrative principle that allows you to trace the connection between various components of independent pedagogical activity, improve educational process of preparing a teacher for the organization and conduct of school work on sexual education of students and the formation of a future family man. This model includes the following main components – motivational, target, operational, and resultative. They cover all the knowledge and skills necessary for the practical use by the teacher of gender education, sexual education and pre-marital education of schoolchildren.

The development of the *motivational component* of readiness is decisive in the formation of others and is achieved by creating a favorable environment for the student, when he aspires to independence, adolescence; increases general activity, attention to the opinion of others. He has a desire to realize himself as a person, to expand the boundaries of his knowledge and diversity of interests, to know the true value for society of gender relations and the role of these relationships in the development of society itself.

The *target component* of the training process is aimed at achieving two goals:

- the formation the students mindset for the implementation of the tasks of sexual education and pre-marital preparation of pupils in the conditions of a secondary school, the achievement of which contributes to the solving of following tasks: a) formation of professional motives for future teachers for solving the problems of preparing pupils for family life; b) the development of the students interests in the problem, stimulating the desire to apply the knowledge gained, acquired skills in practice; c) formation of psychological readiness for work on sexual education and pre-marital preparation; d) psychological and pedagogical mindset of a person as a representative of a certain sex, orientation on the formation of sexually-oriented behavior of pupils;

- the formation of the system of knowledge, skills and abilities of the organization of work on sexual education and pre-marital preparation of pupils for students. For the achievement of which the following tasks must be solved: a) the formation of students' modern ideas about the specifics of work on sexual education and pre-marital education of schoolchildren ; b) mastering by the future teachers the technologies of pre-marital preparation of schoolchildren; c) acquaint students with the problems and difficulties of sexual education of schoolchildren.

The *operational component*, as a reflection of practical readiness, combines an ordered set of pedagogical skills necessary and sufficient for successful work on the formation of sexually-oriented behavior of schoolchildren and their preparation for family life: gnostic, constructive, communicative, and organizational.

The dominant content of training should be an ethical component that takes into account the culture of human relationships. It is advisable to implement a special integrated course to cover this problem comprehensively by integrating knowledge of different branches.

The *resultative component* of pre-marital education involves determining the level of preparedness of a graduate of a pedagogical institution for organizing the sexual education of schoolchildren and preparing them for family life.

2. Content and technology of familistic preparation of a teacher in a pedagogical institution

The analysis of the curricula of pedagogical institutions has shown that most of the general education, socio-ideological, psycho-pedagogical and professional disciplines have potential opportunities for forming the readiness of future teachers for sexual education and pre-marital education of schoolchildren. This can be done by establishing links between individual course topics.

Under the *content of familistic preparation*, we understand the system of psychological and pedagogical, special knowledge that students acquire in the process of learning in various activities (educational, extra-curricular, research). The content of the training is determined by the peculiarities of sex-oriented socialization and pre-marital training and includes the following issues: knowledge of the history of marriage and family relationships; goals, objectives, principles and content of pre-marital preparation of schoolchildren; peculiarities of sex-socialization; characterization of the basic directions of sexual education of schoolchildren and their preparation for family life; effective forms and methods of work on sexual education of schoolchildren and their parents; mastering the basic concepts, such as "social and sexual roles", "culture of intersexual communication", "differential pedagogical influence", etc.

In the process of research and experimental work, it was proved that the effective formation of future teachers' readiness for work on sexual education and pre-marital preparation of schoolchildren is carried out by realization in the educational process of the following *psychological and pedagogical conditions*:

- actualization of the students of the pedagogical institution motivation to acquire various forms, methods and means of sexual socialization and pre-marital preparation of schoolchildren;

- the inclusion of new content elements into pedagogical training in the field of sexual socialization and pre-marital education;

- a combination of analytical, training and practical work of the students in their familistic preparation;

- creation of special courses on this issue with the inclusion of questions about gender, sexuality, family, marital conflicts, etc.;

- the use of practice-oriented learning technologies aimed at the permanent development of structural components of the students readiness to work on preparing pupils for family life;

- the use of practice-oriented learning technologies aimed at the permanent development of structural components of the readiness of students to work on preparing pupils for family life;

- taking into account the gender peculiarities of students in preparing them for sexual education and pre-marital preparation of pupils;

- a combination of competency and gender approaches to the teacher's familistic preparation;

- stepwise assessment of the level of the students familistic competence;

- encouragement of the students to reflect on their knowledge and skills in this area of professional readiness.

The key elements of effective faculty training of teachers are:

a) creating domain knowledge base on the studied issues (to form skills to work with different sources of relevant information);

b) creating an effective and supportive environment in higher educational institutions for students to master pre-marital preparation and gender socialization programs;

c) the use of broad-based teaching methods (role-playing games, staging, debates, discussions, group processes, etc.);

d) cconstructive criticism and positive support for certain issues;

e) access to and assessment of quality teaching and learning resources.

Work on preparing students for the formation of a future family person included activities carried out within the framework of three modules: theoretical, methodological and practical. Work within the framework of the *theoretical module* was carried out according to the following main directions:

- inclusion of information on pre-marital preparation, moral and sexual education into the subjects of the humanitarian cycle in order to form the motivational and value attitude of students towards physically and morally healthy life as a social, professional and personal value;

- consolidation of information on pre-marital preparation and moral-sexual education in the content of the subjects of the psychological-pedagogical cycle in order to form a system of knowledge of students on the actual problems of preparing a future family person;

Work within the *methodological module* was based on the fact that in the course of the ascertaining experiment the conclusion was drawn about the insufficient professional level of teacher preparation.

Within the *practical module***,** we conducted a special course "Preparation of Student Youth for Family Life".

Into the process of gender and familistic competence formation of the future teachers we tried to include all the subjects provided by university curriculum. In the content of these subjects we tried to select those material, which directly or indirectly would help the improvement of professional training of the students in this sphere. To accomplish this task, we have been working with the teachers of history, philosophy, law, cultural studies, foundations of health and other subjects, in which the problem of familistics is reflected one way or another. Of course, this does not mean a radical transformation of these courses, but only the real possibilities for strengthening the necessary aspect, focusing on it, which would promote the development of cognitive interest of students in marital and family problems, sexual relations, and psychosexual health. For example, with the problems of sociology of the family, students became acquainted when studying the course of sociology, with the legal basis of marriage and family - when mastering the course "Introduction to legislation", the moral aspects of marital life and aesthetic values of the family in the course on the basis of ethics and aesthetics etc.

The greatest share in this process, of course, belongs to the disciplines of the *psycho-pedagogical cycle*. Therefore, we have been constantly improving the curricula, because the disciplines of this block have great opportunities in the practical preparation of the future teacher for work on gender socialization and pre-marital preparation of schoolchildren, and tried to maximally adjust the content of these disciplines in terms of appropriate training of future teachers.

Studying the *normative course of pedagogics*, students acquire not only the knowledge of the theoretical foundations of pedagogical science and the ability to effectively organize the education of pupils, which is crucial for the preparation of a teacher of a secondary school, but also master the issues of sexual education and technology of preparing students for family life. Unfortunately, as the results of our study have shown, not all teachers pay enough attention to this problem. Taking into account this, recommendations were developed for teachers of pedagogy on the use of material of separate topics for preparing students for future work on the formation of a future family person.

The *course of history of pedagogics* has a great possibilities to inform the students about the problems of sex education training the students to a family life. Studying the history of education and pedagogical thought in different periods from ancient to modern days, the future pedagogues due to appropriate help of the teachers may attain a necessary information for understanding of trends of development of the investigated problem, to

compare the ways of its solving in modern foreign and native pedagogics. For example, while studying the pedagogical heritage of A. Makarenko and V. Sukhomlynskyi it is possible to sharpen the attention of future teachers to the attitude of the classics of native pedagogy to interpersonal relations of pupils, their desire to form in children the experience of an unsexual love, the importance of sexual enlightenment, etc.

To provide the future teachers with the tools and methods of educational work, necessary for practical activity in the sphere of forming a family person, is one of the tasks of the *course "Educational Technologies*". Considering teacher's technique as one of the most important factors in the formation of his or her professional readiness for work on pre-marital preparation of schoolchildren, in our study, much attention was paid to studying its essence.

During the formation of a teacher's readiness to training the pupils to a family life the resources of pedagogical disciplines were maximally used, which are normative for all the specialties of pedagogical institutions. The course program *"General psychology"* gives the future pedagogues knowledge of the problems of methods of psychological studies; psychical human structure, functional asymmetry of the brain; sensation mechanism; the peculiarities of development and formation of emotional-volitional sphere of personality; methods of communicative sphere investigation, individual psychological peculiarities of personality (temperament, character, and gender peculiarities).

During the studying of the course of *"Developmental and pedagogical psychology"* the students get acquainted with such problems as the peculiarities of psycho-sexual development of the children of different ages; psychology of sex education of the pupils; psychological gender differences and taking it into account in education; psychological basics of individual approach to sex education, a psychology of self-education, psychology of intersexual communication and friendship; psychology of pupils' leisure, psychological new formations during puberty, prevention of wrong development etc.

The program of the *course "Gender Psychology",* which is included in the number of elective courses, includes the following topics: "Differential Socialization", "Gender Psychology and Sexuality", "Psychological Support of the Gender Development of the Child" and others.

Developmental psychology as a basic academic discipline is aimed at studying the age dynamics of the human psyche. In this course, theories of assimilation of the sex role and mechanisms of sex-role socialization (psychoanalytic, social education, new gender psychology, etc.) can be used as gender information.

Recently in educational curriculums of pedagogical institutions has appeared a new course of "Man and the Environment". The studying material of the Human Health module of this course, focused on the teacher's medical and hygienic training, has been successfully used by us to form a professional readiness to work on preparing students for family life and, above all, solving the problems of sexual education of schoolchildren. Special attention

was paid to the following two themes: "Mental health" and "Psycho-hygiene of the family and sexual education". Studying the first topic, the students became acquainted with the concepts of stress, psycho-emotional strain, neurosis, studied the basics and methods of psycho-emotional release. The psychological aspects of the development of sexuality, the consequences of early sexual activity, reproductive processes in humans, the basics of pyogohygiene of pregnancy and motherhood, ways of achieving the psychophysical compatibility of marital partners, issues of sexual education, conditions for the prevention of sexually transmitted diseases and AIDS future teachers meet in the study of the topic “Psychology of a family and sex education”.

The means of formation of the future teachers’ readiness for the education of a family person in our work were: a special course “Preparation of pupils for family life» developed by the authors and introduced at most departments of the Ternopil Pedagogical University, the course "Gender Pedagogy" on the specialty "Social Work", the course "Sexual pedagogy "at the psychological department of the Institute of Pedagogy and Psychology, the course" History of Gender Pedagogy "at the Faculty of History, etc.

In our experimental work, we determined the psychological and pedagogical conditions that ensure the effectiveness of preparing the future teacher for sexual education and pre-marital preparation of schoolchildren:

- the inclusion of new content elements into pedagogical training in the field of sexual education;

- formation of readiness in the interconnection of all its components on the basis of creating a favorable psychological atmosphere in the classroom;

- a combination of analytical, training and practical work of students, adequate to their level of training and learning tasks;

- the classroom training on issues of premarital sexual education, close to real school environment;

- creation of a special course about sexual education or pre-marital preparation.

The conceptual side of the special course "Preparation of students for family life" is provided by providing the students with a system of knowledge and skills that cover the theoretical foundations of psychosexual development, interpersonal communication, sexual education, marriage and family relations, as well as the mechanism of pedagogical interaction "teacher-student" in the organization of sexual education, the development of pedagogical technology and mastering the appropriate tools. The peculiarities of the methods used in practical classes (role games, solving specific psychological and pedagogical tasks, psychological and communicative trainings) increased the interest of students in these classes. As evidenced by the collected facts, the use during the course of the principle of role perspective and the method of simulation of professional situations, in which the student is working out the technique of pedagogical interaction, guarantees the conditions for the formation of future teachers’ preparedness for pre-marital education of schoolchildren.

In the methodology of holding classes on this special course we have determined two main approaches. The first approach was carried out through the inclusion of this or that material into the syllabus of psychological and pedagogical disciplines. This approach is mainly based on retransmission, reproduction of social experience. Another approach was about the use of innovative forms of learning, the main purpose of which was to provide students with the opportunity to learn new experiences based on the purposeful formation of creative and critical thinking and experience in teaching and research activities. Training in this case serves as the organization of learning and research activities; educational-game, simulated activity; active exchange of ideas in the form of creative discussion. The set of active methods and techniques is included in the traditional forms (lectures, seminars, practical classes, solving pedagogical tasks, modeling pedagogical situations) and non-traditional (workshop-auction, project defending, cognitive ring, meetings of a club of connoisseurs, business games) forms of training.

The following forms were used to prepare students for work on sexual socialization and pre-marital preparation:

- *role-playing games* that promote the development and formation of the creative personality of the teacher. In role-playing games students have the opportunity to play out the situation, performing certain roles, playing action;

- *creative problem tasks* (for example, development of draft resolutions aimed at improving material assistance to young families, a scenario for conducting with students an educational lesson dedicated to pupils deviational sexual behavior, didactic games and manuals, models, competitions on knowledge of lullabies and making up tales for children) aimed at professional motivation for organizing sex education of pupils, the formation of practical skills n organizing work on pre-marital education in the conditions of secondary school, corrective work with children who have harmful habits.

- *resolving* by future teachers the pedagogical *situations* in which they could best realize the functions of differentiated pedagogical influence on the formation of sexual behavior of schoolchildren and their preparation for family life. At classes students were invited to play different situations with which the teacher meets in his professional activities in the process of pre-marital preparation of pupils. Exercises, role-playing situations and the clarity of the situations discussed make the conversation with students substantive;

- *writing essays* by students on a wide range of topics about familistic and pedagogical issues that are intended to reveal the general level of students' competence in this problem, to stimulate cognitive interest in it, for example, students are invited to write essays on the theme "One day from the life of my future family," " What would I change in my family. "

- *questionnaire "Proverbs":* "To what extent do you agree with the following judgments (I fully agree - 5 points, I rather agree - 4 points, hard to say - 3 points, I disagree more - 2 points, I totally disagree - 1 point)?";

"A man is a head, a wife is a soul";

“You will get old enough from a bad wife, from a good one - you will be young."

"The path to the heart of a man lies through his stomach."

"Not the hostess who speaks, but the one who borshch cooks"; etc.

- *the "Family Chronicles" method*, in the course of which the students first write on the sheets of paper the stages which, in their view, the family passes from the moment of the birth of the relationship to the registration of the marriage, as well as in different periods of the family life, and later the group discuss the results;

- *the “Brainstorming method”,* realizing which curator asks the audience the question: "*What is the concept of a family for you?", "What are the main stages of its development?", "What are the main difficulties of modern young couples?", "What stands for the basis for creating a family? "*, suggests to give one's own answers to the question and expresses his opinion about the results obtained;

- *the method of "Bureau of Findings",* when students are asked to make a social and psychological portrait of an ideal marriage partner, and later the results are discussed;

- *the method of “Conceptual Chart* **“**Division of Family Duties, "” in which students are asked to divide responsibilities in the family between a husband and a wife and display the generalized material in the conceptual chart;

- **“***Interview” method*: for example, the teacher invites students to ask a lawyer questions they are interested in, or to interview an employee of the civil registry office.

- "Way Out Search" method. Students were encouraged to comment on and find a way out of the following situations. Here are just a few of the following:

1. 15 year old girl wants to go for a weekend with a large group of friends to a country house of one of her classmates. Her father doesn’t allow her to go, but repeats the argument repeatedly: "I know what guys need from you." The girl asks to explain the reason for the refusal.

2. A 10-year-old child asks the dad: "Who are prostitutes and why are there so many programs about them on television?" (One father replied that they are the women who sell their love for money. Is this enough?).

3. A 10-year-old boy asks mom: "What is sex and why are adults doing it?" etc.

- *the "Association" method***.** Students are asked to pick up 1-2 associations for each letter of the word "Family": F - ...; A - ...; M - ...; I -…;L- ...;Y-…..Later, students exchange their associations by setting up an associative series. In conclusion, students are asked to reflect on the information received, pointing out all the essential features of the institution of the family.

- *method "Non-standard situation"*. The offered situations were printed out and hidden in envelopes, which students took out one by one. The difficult family conflict situations were offered and the students had to solve them reasonably. Here are just a few examples:

Situation 1. On a Saturday, spouses have different plans: a husband is invited to a corporate party, and his wife to her friend's birthday. But everyone wants to spend this evening together.

Situation 2. On Saturday, a young family needs to nail on window ledges, wash their clothes, buy food and prepare lunch, wash their dishes and floor, take things to dry-cleaner and take shoes for repair. Suggest the order of friendly and concerted actions of husband and wife.

Situation 3. Your wife is in a bad mood because of troubles at work, which she does not want to tell about. It is necessary to make her flutter and provide moral and psychological help.

- *the "Culinary Combat" method***.** Students are offered any culinary tasks - salads or canapés, sandwiches or juices, etc. The main thing that is appreciated here is the consistency in the actions and, of course, speed and quality.

A positive contribution to the familistic preparation of future teachers was made by the recently introduced elective course "Sexual Pedagogy", which was offered to graduate students of three faculties. Objectives of the educational discipline "Sexual pedagogy":

1. To study without prejudice, perceiving his or her own sexuality and sexuality of others
2. To learn skillfully talk about sexuality and judge it (in the cognitive field: knowledge of the subject; in the emotional sphere: feelings and emotions; in the pragmatic sphere: manners and behavior).
3. Learn to develop and train a critical approach and make free decisions about their own and others' sexual settings.
4. To learn to show readiness to respect the sexual freedom of others (without affecting the intimate sphere and stimulating the ability to differentiate between attitudes and judgments).
5. To learn in youth to properly recognize and overcome sexual contradictions and feelings.
6. To learn to interfere with the separation of sexual desire and make it possible to integrate it into a coherent personality.
7. Learn to respect and realize sexuality in a variety of relationships between sexes.
8. Learn to evaluate the opportunities and risks of personal fulfillment of sexual inclinations.
9. To learn to be ready at personal responsibility to build partnerships and love affairs, in which the partner is not doomed to gaining negative experience.
10. To learn to determine the values of the social environment with its various forms of influence on sexual development.
11. Learn to evaluate the social significance of sexuality.

The special course allowed deepening and systematizing the students' knowledge of the method of sexual education. Solving pedagogical problems and modeling the situations of interaction between the teacher and the student enabled students to be acquainted with such techniques as the instructive verbal effects of the teacher on the student's ability and success. Constructive praise and criticism, establishment of realistic goals for the given person, use of individually-oriented norms in evaluating the results of activities, emotional and positive attitude to the student's achievements, his current achievements in comparison with the previous ones.

For a special course, students received creative tasks for individual work: the development of lessons notes, advice for parents, making their genealogical tree, and writing of works for children, the production of visual material and didactic manuals, portfolio. Their accomplishment is carried out in the process of preparation for seminars, laboratory and practical classes, which holds a collective discussion and analysis of accomplished tasks. For example, the individual task on the topic "Awkward children's questions and adults' answers of on them":

1. To consider different points of view on the answers to children's questions.
2. To develop requirements for adult responses to children's question.
3. Consider options for answering "obscene" children's questions.
4. To develop abstracts of conversations, classes, with which it is possible to answer questions that are of interest to children properly.
5. To develop means that can be used for solving the problems of sexual education: the selection of illustrations, the writing of children's books, poems, manuals and didactic games.
6. To develop a draft program for the sexual education of schoolchildren.

All of these tasks are practical and can be used by students in working with children during pedagogical practice. One of the effective ways of presenting familistic and gender-sex knowledge is the use of humor, especially jokes. An anecdote task in describing the problems of marriage and family is to brake the sad monotony of everyday life with witty coverage of some unusual details of life. *An anecdote about family life* is a phenomenon so common in everyday life that few think of its significance in contemporary culture, and especially about why from century to century this topic does not only cease to be interesting but attracts more and more attention.

On the one hand, there are jokes on the topic of women's logic, about always grumbling wife, the quarrelsome scary looking mother-in-law. On the other hand, there is a cluster of anecdotes about a careless husband, whom a woman easily deceives, about a drunkard who gets into various adventures, and so on. The subtopic of marital relations is often the sexual relationship of the spouses, and the second sub-theme is the division of power and roles in the family. A special topic of family relationships, and hence anecdotes, is the relationship between spouses and their parents. The effect is the use of jokes on the issues of "mother-in- law and son-in- law ",» mother-in- law and daughter-in- law ".

During the lectures on a special course, devoted to preparing young people for marriage, the use of anecdote should reinforce the above. The lecturer, the teacher should be able to convey the joke story properly: the presence of content pauses, acceleration or slowdown of the tempo, accentuated intonation of pay off, and in some cases, the play of the role of characters. Without this anecdotes lose their comic effect, and hence the role of an enhancement factor. It is worth remembering yet another feature of an anecdote is brevity. The shorter anecdote, the more effective it is.

An important feature of an anecdote's presentation is theatricality, which consists in its ritual of play, the specific simulation of a theatrical act, presented by one "actor" and for "the listener". Moreover, some anecdotes include the verbal participation of the audience, the response to the rhetorical question. The effect of anecdote is enchanted by the seriousness of the lecturer (he is not laughing, he knows its meaning). Anecdote brings together the lecturer and audience, removes the alienation between them, preserving their autonomy and independence. Anecdote is a simple way to an audience that does not bind anything. For the communicative implementation of oral text as an anecdote, it is to the purpose to use a whole set of special metatext phrases, which provide the introduction of the actual content in the text of the lecture, conversations ("By the way, this is an anecdote ...", "Have you heard a new anecdote about it?", "It's like in that joke ...", "And here's another anecdote on this topic ...", etc.). Such meta-text inclusion, along with the stereotypes of form, content and function of the anecdote, determines the appropriate attitude of students, the willingness to switch communication from the cultural field to a parody of anti-culture, to comic.

The art of the anecdote telling, the skill of an anecdote teller requires another important skill - taking into account situational expediency. Without observing this condition, without taking into account the adequate situation, anecdote loses its comic effect, often turns out to be inappropriate, and therefore feeble. And vice versa, the most ordinary story, which is narrated with regard to the situational feasibility, relevance and has an unexpected parody ending, can be an anecdote.

A significant role in the formation of practical preparation of students for work with pre-marital education of schoolchildren we gave to pedagogical practice. Students of experimental groups received the tasks we developed for organization of this work in schools of the city and the region, which included acquaintance with the statement of pre-marital education during the teaching of the subject and in extra-curricular work, studying school documentation on this issue, studying the level of sexual culture of students, conducting educational activities on a given the topic, visiting the schoolchildren families and the appropriate work with their parents, etc.

The systematic observation of the students' actions during the pedagogical practice showed that the number of students who feel the need to conduct extra-curricular activities focused on intersexual communication amounted to 65.6% of the interviewed 250 people .; 49.8% sought to hold educational classes for marriage and family, 70.2% of students freely

maintained group and individual conversations with senior pupils on intersexual relations, improper sexual behavior of individual pupils, and some publications in the youth press on the moral- sexual issues. Analysis of lesson notes showed that more than 40% of students tried to take advantage of our recommendations regarding the use of school subjects content for sexual education of schoolchildren (although there are objective causes for the domination of students of historical, natural and philological faculties), have shown the ability to organize and simulate this work .

In order to raise the interest of students in the subject at the University, in collaboration with the National Academy of Pedagogical Sciences, a scientific laboratory was created on the issues of gender education of pupils and students, and the scientific problem group "Gender Socialization and Pre-marital Preparation of Schoolchildren" was organized. Among the scientific topics that were developed by students are the following: "P.P.Blonsky about child sexuality", "Preparation of Schoolchildren for Family Life in the Works and Practical Activities of V.O. Sukhomlynskyi", "The Issues of Sexual Education in the Ethnopedagogy of the Ukrainian People", "Psychological Aspects of Intimate-Sexual Preparation of Schoolchildren for Marriage", "The peculiarities of Communication between Boys and Girls in the Senior school ", "Self-education in the field of culture of the feelings","Pedagogical assessment of certain aspects of puberty», «Psychological and pedagogical preparation of students for the fulfillment of maternal and parental functions "," Ways of forming intimate vocabulary of the school pupils "and so on. Some results of scientific researches of students were reported at university and interuniversity scientific-practical conferences, and also used by the author of the dissertation when writing the manual "Psychology of family life". Over the course of the experimental work in the problem group more than 300 students from different faculties took part. Some of them, after graduating from the University, worked under our guidance on the theses on this subject. As a result of the work of the laboratory on this subject, three doctoral and eleven candidate theses have been defended.

Considerable attention was paid to *extracurricular work* in the process of preparing students for work in sexual and pre-marital education. Arrangement of a permanent lecture "Young Family", profiled quizzes, reader conferences, meetings with specialists, theme nights contributed not only to the student's organized leisure, but also influenced their professional training to conduct similar activities with pupils in extra-curricular time.

As the criteria of efficiency of the influence of this special course on qualitative training of the students to the work with sex education of the pupils and the future family man or woman formation was coefficient of their satisfaction with the content and methods of its teaching. 170 master students were offered to answer the questions “Are you satisfied with the content of the special course?”, “What was valuable in this special course for your pedagogical growth and future work with the problems of gender and premarital education of the pupils?”.

The questionnaire helped to determine that fully satisfied with its content are 50% of the questioned, satisfied 41,7%, unsatisfied – 5,4%, completely unsatisfied 1,1% of the students. On the basis of this fact the score of satisfaction was determined. The general coefficient of satisfaction with the special course we calculated with the help of the formula:

$$Z=\frac{85\cdot 2+71\cdot 1++3\cdot 0+9\cdot(-1)+2\cdot(-2)}{170}=\frac{228}{170}=1{,}34.$$

$$Z=\frac{A\cdot(+2)+B\cdot(+1)+C\cdot(0)+D\cdot(-1)+E\cdot(-2)}{N}.$$

where: A – the quantity of the students maximally satisfied with the special course; B - the quantity of the students satisfied with the content of the special course; C - the quantity of the students with undefined attitude; D - the quantity of the students unsatisfied with the content of special course; E - the quantity of the students maximally unsatisfied; N – total quantity of the questioned.

Attained results give a ground to make a conclusion about the efficiency of the work carried out in the process of preparing future teachers for work on the sexual education of students and the formation of a future family man.

Comparison of the consequences of summative and formative assessment allows us to speak about raising the level of theoretical knowledge of students on gender, marriage and family. If according to the summative assessment, 72.3% of students of the second year of studying from the various faculties of the Ternopil Pedagogical University (totaling 350), who completed written control papers, gave incorrect answers, 24.5% - incompletely correct, 5.2% - complete correctly , then the consequences of the final assessment - up to 11,3% reduced the number of wrong answers, correct answers were 48,9%.

Experimental work showed that not all the students of experimental groups managed to form a high level of professional readiness for work on preparing students for family life. This can be explained by the fact that not all the students of a pedagogical institution have a pronounced professional pedagogical orientation and sufficient development of pedagogical abilities; not all the students, due to their individual characteristics, were able to step over false barriers of shyness, various complexes, and so on. But the changes that have taken place indicate the right way to achieve the goals set.

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PSYCHOLOGICAL AND PEDAGOGICAL FEATURES OF SELF-IMAGE OF THE FUTURE PEDAGOGUE UNDER STRUCTURAL COMPONENTS OF SELF-EDUCATIONAL PROCESS

Abstract. *The problem of the spiritual culture of the teacher is considered. The author highlights and describes the main spiritual and professional aspirations of the teacher for the development of spiritual culture. The structural components of the spiritual and professional formation of the future specialist of preschool education are considered. The content of formation of personal qualities of the teacher through the analysis of internal and external factors of influence is revealed. The components of the process of self-education of an educator and a teacher are analyzed: cognitive, emotional and appraisal and volitional. The method of estimation of the strength of spiritual and professional aspirations and degree of their realization in pedagogical activity is offered. The results of the research of the system of ideological ideas and beliefs that are realized in relation to other people and the surrounding world among student youth are presented.*

Introdaction.

The statement of the problem consists in determining the spiritual and moral component of the future teacher character as a subject of the educational process requires the disclosure of the structural components of the professional training of teachers in working with children of preschool age, in particular the content of the humanist orientation of the process of self-education and the formation of personal qualities of the teacher. This problem involves the study of the components of spirituality, on the basis of which is the process of internalizing the values presented in the form of pedagogical actions.

The spiritual and moral component of the personality character, first of all, is determined by the dominance of moral values and goals as regulators of its activity. Spiritual orientation of the teacher's activity makes it possible to fill the educational sphere with harmonious relations in the "subject-subject" system.

For the effective activity, the teacher is required to implement a creative approach, the ability to develop childhood identity and uniqueness, create conditions for the spiritual and moral formation of pupils. A child of the preschool age subconsciously understands and feels negative people who work with him/her. It is important for a teacher to possess humane values and the ability to educate them in his/her pupils. The activity of a teacher in the preschool education is based on the priority of the interests of the child, pedagogical ethics, social conditions, in which the child develops, and the support of the personality traits of the pupils.

1. Basic material presentation

Contemporary modernized world, in the context of subordination to the requirements of the society, taking into account its crises, progressive views and actions, does not reject the three functions of the teacher: as being natural, social and spiritual. An indicator of the successful integration of these functions is the relation to another person as a self-value, which is determined by the ability of the individual to self-help. [1] Losing these qualities leads to the development of disharmony, which subsequently manifested in emotional imbalance, loss of self-control, contradictory behavior. Therefore, the actual tasks of the teacher are the timely prevention of disharmony and the implementation of a system of measures that provide spiritual and moral self-regulation.

The teacher of a modern institution of preschool education acts as the carrier of encyclopedic information for preschoolers, and at the same time it is also an accomplice in its processing and a transformer. Psychological peculiarities of childhood are characterized, mainly, by unstable indicators of perception, memory, and attention. However, mental activity is continuous and tense. The increased sensitivity of the child requires parents and educators to control their behavior and their emotions and mood. The personality of the teacher becomes of great importance and to a large extent becomes a guarantee of success in the development of pupils.

The reorientation of the child from emotional communication, which is important at an early age, on the partner's interaction between the pupil and the educator, the interpersonal interaction between children is a responsible stage in the period of pre-school childhood. It is important during this period when information technologies appear in the child's life and the connection with the surrounding world is gradually lost, then educators and parents need to set priorities in the development of their children in a timely manner. In 1999, the American Academy of Pediatrics issued a program statement on children and the media. It noted: "Studies of early brain development suggest that babies and toddlers have a critical need for direct interaction with parents and other adults for healthy brain development and for developing social, emotional and cognitive skills."

A preschool education specialist should understand that the child's social needs for love, good, and grown-ups should be provided in conjunction with adults and peers. Today's challenges to the individual teacher educator is the ability to take the child as it is empathy that turns the interaction with the child emotionally and professional implementation of educational, training, instructive and recreational functions. The teacher's emotional and evaluative relationships form the basis of the morality of himself and his pupils. Determining the modern development of a child requires a teacher mobility and flexibility, continuous improvement and further development. N. Kolosova discloses the content of the readiness of a specialist to carry out professional activities as a set of humanistic, spiritual and practical values and professional competence [2].

Structural components of professional training are motivational, cognitive, operational and reflective. The primary task of the teacher is to provide pedagogical support to children, to establish relationships with preschoolers, to focus on the child's opportunities that is, the motivation of the activity determines the degree of readiness of the teacher to work with children. The components of the cognitive component definitely remain basic psychological and pedagogical knowledge and their strength and flexibility. It is the educator who acts as the coordinator, commentator and opponent of all influences on the child. The ability to diagnose a child's development, provide pedagogical support, and choose the practice of solving the problems of a preschool child is determined by the operational component. Activity and passivity, dynamism and reflectivity in the development of the child are provided by the pedagogically-reflective activity of the educator.

The basis of professional activity of a teacher is his ability to combine psychological and pedagogical, methodological training with his own humane orientations on the basis of tolerance.

In the scientific researches of E. Bakhich the basic criteria of tolerance are defined as following:

- constancy of moral guidelines (kindness, patience, responsibility);
- emotional sensitivity as an understanding of what is happening in the inner world of a child;
- divergence as lack of stereotypes, superstitions; flexibility and critical thinking, ability to solve problems, based on the real situation;
- mobility as the ability to quickly change the strategy or tactics of case management. [3, p. 16]

G. Bielienka emphasizes that the specificity of the structure of the professional competence of the teacher consists in that it includes the characteristics of personal qualities of a person. For a teacher, personality characteristics are even more significant than his knowledge, skills and abilities. The personality of the teacher acts as a component of professional competence and allows him to independently and effectively realize the goals of the pedagogical process. According to G. Bielienka, the professional competence of the educator is an integrated concept, which includes: the outlook of the individual as a basis for the development of all components of professionalism, profound knowledge and practical skills in the chosen field of activity, developed professional-significant qualities. On this foundation, in the process of acquiring a pedagogical experience, the authority of the educator is built up. [4, p. 21]

It is important that the teacher should engage in self-education of moral qualities as well as self-improvement and self-knowledge. William James, Charles Kulee, George Mead, Robert Burns were the founders of solving the problem of self-education. The integrative model of the upbringing of Robert Burns is at the heart of modern theories of

self-education and self-formation of the personality. Karel Blag and Michael Shebak are authors of the concept of self-education; Polish scientists Y. Reykovskyi and Z. Petrasynskyi have developed a system of self-formation of the personality.

The personal qualities of a teacher-educator are the result of the influence of external and internal factors. If external factors are represented by the sociocultural environment and their direct influence on the personality, therefore internal factors in the formation of personal qualities depend on the self-education program of the personality. The basis for self-education is self-development. The main criterion for internal formation is the desire of a man to self-assertion, to the knowledge of his inner world.

The integrated system of self-education and upbringing in modern psychological and pedagogical science is synthesized in the "I-concept". The process of forming our own perception of ourselves as a moral person takes its origin from the understanding of our own Self as a subject that differs from others. A teacher who will take such a position will be able to organize the process of raising the children of preschool age in a qualitative way. Such an image of I involves constant internal movement and greatly affect the psyche, world perception as a whole, determines the main line of behavior of the teacher in the educational environment. The need for adequate adaptation of the teacher in the surrounding social conditions requires him to appeal to his inner self.

The wider the moral outlook, the more stable the feeling, the external assessment of the environment. The task of the teacher to direct the process of self-education to self-assessment discovery based on self-esteem. Teacher John Locke believed that the talent of educators and the social environment in which the pet is, are crucial to his personal development. According to D. Locke, the human psyche from birth is similar to a blank board, or a blank sheet, where there are no records yet. John Locke noted that 9/10 people become good or bad, useful or useless due to the education <...> the proper education of children depends on the welfare of all people, which indicates the firm belief of the philosopher of the extremely important role of education in the development of the child, a person [5]. Francoise Daltot, M.D., pediatrician, emphasizes that "parents bring up children as if the kings govern nations. We are accustomed to the myth of the progress of the embryo from birth to adulthood; therefore, we identify the evolution of the body with the evolution of thinking. But in fact, symbolic thinking - from conception to death - remains unchanged. For an adult the idea itself is outrageous that he and the child are equal ". [6]

Self-education of an adult begins with the awareness of the person himself, his place in the social activity, his personal "I". The process of self-education and education of moral qualities in the teacher and teacher represents the unity of the three components: cognitive, emotional and appraisal and volitional. Harmonious integration of these components forms the system of the educational process and predicts a positive result. A specialist in preschool education forms the moral experience of a preschooler. The high efficiency of such a process can only be provided by a person who already has such a positive moral experience.

The cognitive component of the self-education of the teacher implies the ability to predict the goals. This is a stream of consciousness, written by U. James, or a sense of its own uniqueness. The teacher must clearly imagine "I-image" myself and really evaluate my "I-real" possibilities. According to James U., these modalities are represented by "I-ideal", "I-mirror". It is logical that the perceptions of yourself are subjected to emotional and appraisal judgments that form an adequate or inadequate assessment. "I-real" varies between physical, social, mental and emotional (spiritual) self-value. These variations are closely related to the individual's ideas about how others see it. It becomes dangerous when the teacher loses his belief in his own strength, the goals. Out of these situations there are several variants of personality behavior. The first option is to reduce appetites and to adapt the ideal to own abilities; the second option is to recognize that the goals have been achieved (for example, the moral experience has been gained) and the third option is to try to change the information that is received in the imagination. K. Khori called such attempts neurotic aspirations for grandeur. [7]. An important condition for the formation of the personality of the teacher is to appeal to his own acquired during the life and education experiences that synthesized the various effects of positive and negative features of character and the nature itself of the personality.

S.L. Rubinstein noted in this regard that any attempt by the educator "to make the child aware of the moral norms, while avoiding the child's own activities in relation to their acquisition, undermines the very foundations of healthy, mental and moral development of the child, the education of her personality traits and qualities" [1]. Scientific thought on the problem of development in a person of consciousness compares various models of the justification of the problem of interaction between moral and intellectual experience. Eccles states: "The unity that is felt is not a consequence of neurophysiological synthesis, but rather in such a way that our integrational properties of the self-conscious mind are manifested" [8]. J. Hawkins argues that consciousness is the same ability to store pieces of information in a declarative form so that you can transfer them from memory by your own will to someone else by means of oral or written language [9].

For the teacher it is important to understand the universality of the preparation for working with children. This training implies a holistic approach (material and ideal (spiritual)) to the process of forming the child as a personality. In this dichotony, the greatest attention should be paid to the spiritual component, the ingredients of which are a thought a feeling and a will. The sensational perception of the world and of his own I has a triune property consisting of the following: 1) all partly concentrate around oneself; 2) focus more and more on oneself; 3) through this over concentration, join all the other centers that surround him. The moral image of the teacher is formed through the sensory perception of the world. Hugo Munstenberg scientifically substantiates this problem, considering that "sensory impressions are the first material to be included in psychological equipment." [10]. The educator needs knowledge and awareness of his role in the society.

The synthesis of vital and socio-cultural experience combined with professional experience is a favorable ground for the formation of a humane image of a teacher-educator. As a personality, a man lives in a common life with all nature, but reflects it in himself in a special way, individualizes it. The human soul is the ideal form of all human personality, the idea of the body is the idea of an idealist system. [11]. Synthesis of the human factor in the system of components of cognition provides the moral culture of society as a whole. Such integration gives grounds for asserting a new methodological constant that ensures functioning of the planetary level of cognition.

Directions to the idea of holistic worldview, education involvement in everything that happens in the world, establishing harmony with nature, culture, society and the world as a whole were revealed in the works of M.A.Berdyayeva, S.M.Bulhakova, V.I. Vernadskyi, V.S. Solovyov, P.A. Florenskyi, K.E. Tsiolkovskyi.

Humanity and human responsibility for the evolution of the biosphere and society are at the center of attention to the noospheric approach to the upbringing and the educational process. Orientation to the high moral ideal, characterized by a high culture of life, work, knowledge, creativity, implements the principles of the noospheric approach. A teacher who chooses the noospheric concept on the path of self-education and upbringing of preschool children is based on the development of the noospheric worldview (development of the need for the synthesis of knowledge of intellectual culture); development of the noospheric worldview (forming a sense of the unity of the value of all living things on the planet in order to ensure the humanistic moral and psychological climate in society); self-preservation - activity based on the principle of non-destructive behavior. Thus, the emotional-figurative component of the education process will be more effective at the expense of apperception.

The connection of new experiences with the experience of the past provides stability of perception and assimilation of the necessary knowledge. The more a person, the teacher reveals the essential for apperception of the relationship, the more new material will serve to enrich its spiritual stock. Hugo Munsterberg classifies apperception according to human types:

- individuals reproduce only what they have perceived and analyzed;
- individuals who synthesise the gained knowledge;
- individuals who supply with the experience gained earlier the perceived material;
- persons who interpret irrationally the information material, relying only on feelings and emotions.

It is important that a person in the process of working on the creation of their moral image do not focus on accidental phenomena, but on everything that is important in phenomena. The teacher has to understand that at the sensory level, knowledge related to consciousness makes it possible to realize its new role and mission in the society. K.D. Ushinskyi in this regard says: "... consciousness is still for us precisely that which not only

leads to the trace of sensations, but also knows the connection between them, can put them in such a way that they explain each other, does with them something similar to what the children do with pieces of complex pictures: every piece itself of the picture does not make any sense; but there is a true place for it to be found - and a piece becomes meaningful, it becomes part of the hand, foot, piece of clothes, and so on. [11, p.438].

Cognition of the world by the educator at the sensory-figurative level is the synthesis of life and socio-cultural experience, analysis of professionalism and pedagogical work on the basis of the deep perception of the world; representation of the general picture. The importance of developing the sensuous-figurative level of the learning world on the path to self-education is that it is the first stage for the teacher in the development of the need for pedagogical activity. Note that K.D. Ushynskyi on this subject stated: "A man for his bodily organism is a micro community of the world, an organism in which all the world's phenomena of external nature converge in their influences. A man is a creature that occupies a place in the universe, in the planetary system, on the globe, the essence of a certain race, a certain tribe, a nation, a family, a family with his own congenital idiosyncrasies (singularities), in one word, an individual. As an individual, a person lives in a common life with all nature, but reflects it in oneself, in a special way, individualizes it. The human soul is the ideal form of all human personality, the idea of the body is the idea of an idealist system. [11, pp. 443-444]. Thus, the analysis of the sensory-figurative component of the process of self-education proved the importance of the experience of knowing and perceiving the world as both internal and external.

The next component of the process of self-education is the volitional, which is based on self-regulation and self-realization of the man. Volitional efforts mobilize the person, bring it into action and stimulate self-improvement. I-real causes the tendency of behavior, prompting a person to predict the respective states, actions, deeds. In its behavior, I-real is guided by I-ideal (how I want to be).

Self-regulation is based on volitional sphere, is realized in unity with self-realization. By regulating their living systems of different levels of organization and complexity, a person realizes potential opportunities.

In this case, self-regulation combines the energy, dynamic and meaningfully conceptual aspect. Hence, the structure of self-regulation consists of the goals and objectives, the definition of the conditions of the activity, the establishment of a program of the sequence of actions, the criteria for evaluating activities, from the actual results achieved and the relevance of their criteria for success, if necessary, correction of activities. Self-regulation is individual. The person's qualities of the subject and his habits in organizing his actions, which are formed in the process of education, occupy a significant place. [12].

A teacher, who is working on developing a system of skills that provide the necessary level of functioning of the psyche in activities and behavior, must know clearly

his own real and potential opportunities, the properties of their mental activity, the level of force of volitional energy. Self-regulation, thus, will help to solve effectively vital and professional tasks.

The research of scientists confirms the fact that the problem of self-regulation of a person should be considered in three aspects:

1) reflexive self-regulation aimed at a conscious defense and adaptive reaction;
2) arbitrary regulation, in which a person deliberately makes regulation of behavior by means of selected and empirically proven methods and techniques;
3) purposeful self-regulation using special methods, techniques and methods applied in various conditions and situations.

Determining levels of of volitional qualities formation can define the levels of formation of the personality regulatory sphere. Such an empirical mechanism becomes possible only because self-regulation is a component of the volitional sphere.

Thus, a high level of volitional development is characteristic of a person who seeks to overcome difficulties independently. To solve the tasks successfully, any difficulties are perceived as another task on the way to the goal. The average level is the stability in solving difficulties; is manifested only in case of interest in the work or course of events; when the activity is not fascinating and there are difficulties, then a person leaves his goal. The low level of development of volitional qualities and the process of self-regulation is expressed in a negative attitude to difficulties, inability to mobilize efforts to overcome them. A positive attitude is formed only in the process of easy and interesting work. [13].

In addition to psychological self-regulation, physical self-regulation is no less important in shaping the will as a component of the process of self-education. The content of physical self-regulation includes a number of tasks, the implementation of which will ensure an effective process of self-regulation: psycho-physical training, psycho-regulating training and respiratory gymnastics. In the process of physical self-regulation, vital indicators of health, both mental and physical are improved.

Self-realization as a component of a volitional component requires the ability to design real goals, ideals that can be achieved under all conditions and energy costs. Scientists distinguish two forms of self-realization of the personality. In particular, S.I. Kudin, distinguishes the external and internal form of self-realization. Self-expression of the individual in various spheres of the life is characterized as an external form of self-realization of the personality. Man realizes his life potential in the profession, creativity, sports, art, education, social activities. The internal form of self- realization provides self-improvement in the physical, intellectual, aesthetic, moral and spiritual aspects.

The structure of self-realization includes not only forms (external and internal), but also types of manifestations of self-realization of the personality.

The first kind is activity self-realization. Such a form of self-realization provides a high level of professional competence and is characterized by the expression of the subject in various activities.

The second kind is social self-realization. Participation in community life helps to realize goals by means of the society. Social self-realization refers to external forms of self-realization.

The third form of self-realization provides the development of personal potential and contributes to the spiritual growth of a man - this is personal self-realization. Positive effect of personal self-realization ensures the development of curiosity, responsibility, sociability, hard work, perseverance, morality. [14]

Self-realization, according to A. M. Bolshakov, can have both positive and negative effects. The crisis of semantic loss, boredom, emptiness, alienation, anhedonia, a stop in personal and professional growth, personal burnout, lack of life's aspirations and plans, low level of motivation, activity, and the saturation of life with bright experiences are signs of a negative manifestation of the results of self-realization. In the opinion of the researcher, such an effect may be caused not only by the experiences of exhaustion of own resources after achieving significant life successes, but also because of the dissatisfaction of the subject with the course of the process of self-realization and the evaluation of the achieved results. [15]

One of the most important forms of self-realization of a person is a professional self-realization that is characterized by a high level of disclosure of the personal potential of a specialist in the chosen profession, the development of his abilities, the constant demand for his professional qualifications, the extensive use of his professional experience and achievements by other specialists. Signs of professional self-realization are:

- formation of own lifelike professional "space";
- high level of creativity, in the course of professional activity;
- recognition of specialist’s achievements by professional co-authorship, wide use of his professional experience and achievements;
- achievement of professional goals by the specialist, prevailing satisfaction with his own professional achievements.

Thus, the will component of self-education process consists of self-regulation and self-realization. Analysis of these constituents provides an opportunity to determine their content and intrinsic features. Self-regulation is a conscious process of self-education of a man which includes the regulation of his vital systems by means of self-control, self-direction, autotraining, and so on.

Self-realization as a part of volitional component is specially manufactured system of skills and abilities to ensure the necessary level of mental functioning in the activities and behavior of the personality. The methods of self-regulation are self-regulating, self-direction, self-belief, self-excitement.

Professional self-realization as a form of self-realization, occurs through two interrelated ways: externally professional (achievement of significant advancements in various aspects of professional activity) and internally professional (professional self-improvement aimed at improving professional competence and develop professionally important qualities).

In the process of self-education, the teacher assumes the tasks realization of the humanistic level of the personality development. Such development is ensured by the desire to find meaning of life. A teacher with a high understanding of life, professional choice and general level of subjective control, as a rule, consciously or unconsciously occupies the position of the active founder of his life and relies on values such as love, beauty, creativity, goodness, development [16, p.74 -85].

Indicators of personal development and self-education are considered the choice in which the advantage is given to high order values. When a teacher in his professional activity is focused on self-education, the search for meanings, this points the level of spiritual growth. According to V. Frankle, the search for the meaning of life is the actual understanding of life, the disclosure and filling it with the meaning, which beyond our spiritual efficiency could not only be found, but in empirical life would not exist [17].

The basis of the humanistic context of pedagogical activity is the system of ideological notions and beliefs that are realized in relation to other people and the surrounding world.

From our point of view, it is possible to assume that:

- The spiritual and humanistic culture of the educator-teacher can be studied by analyzing its aspirations and the degree of its realization;

- The strength and degree of realization of the desire corresponds to the comprehension of the statement, which may be presented as a certain value.

To confirm our assumptions, a research has been carried out among the students of the fifth year, the educational qualification level "Master", specialty "Preschool education" of the Rivne State Humanitarian University, in the number of 60 people. The purpose of the research was to study the spiritual culture of the student's personality.

The methodology of testing eleven types of spiritual and professional aspirations, which correspond to pedagogical activity, professional requirements to the teacher-educator personality has been highlighted.

1. Aspiration to understand professional knowledge as a value. These aspirations are reflected in the level of conscious assimilation, preservation and use of professional knowledge by the teacher, which are the core of spiritual culture. In relation to the higher professional values of the teacher, one can distinguish between the desire to distinguish actual human and professional values from pseudo values, to maintain a professional balance between material and spiritual values, to develop and improve his knowledge, skills, abilities, to create his own system of personal values in the field of the human psyche,

its activities, professional relationships, appraise and respect the culture of his nation, people, family, profession, a man as a personality and a subject of labour. Because of such specification, professional aspirations create a professional orientation that determines the focus on its own inner, spiritual world and childish, which creates a more perfect factor of the professional activity and ensures its quality and effectiveness.

2. Aspiration for love for children. Love is a socio-historical phenomenon, therefore, its development is always interdependent with the development of a common culture. At the level of the spiritual culture of the teacher, the stated desire generates in the context of interaction the spiritual communication between the teacher and the child, which determines the mutual moral and mental enrichment. We believe that a person without the ability to treat and appreciate all children equally and with an open heart to perceive a child with all his disadvantages and advantages cannot be a teacher with a developed spiritual culture, no matter what that person has a reserve of professional knowledge, skills, personal qualities and abilities.

3. Aspiration for reflection. For a teacher, reflection is the main intellectual means of self-knowledge and self-regulation, acting as a mechanism for the development and self-development of his spiritual culture. At this level, the content of the aspirations for reflection involves an understanding of the preconditions, patterns and mechanisms of their own pedagogical activity, the use of various intellectual means of self-knowledge and self-regulation, analysis of the results of his own activities, past experience, goals for the future, awareness of standards, regularities, procedures and mechanisms of cognitive processes in the professional activity, comprehension and development of his vital program, goals, etc.

4. Aspiration for spiritual communication in the value aspect for a teacher determines his culture of communication as a component of spiritual culture. The spiritual culture of a teacher should be characterized by the ability to search and determine information of spiritual nature, the ability to perceive non-standard thoughts, the ideas of partners for communication, a sense of respect, the expression of sympathy, empathy in the process of communication, the ability to see valuable in the views of each person, the search for new forms of communication, the ability to expand consciousness, the formation of a new thinking, a new picture of the world.

5. Aspiration for humanistic orientation. Orientation characterizes the motivational sphere of the personality, defines its initiative behavior, that is a structured system of dominant motives and reflects its professional purpose of laying as a component of spiritual culture. The realization of these aspirations is aimed at bringing benefits to the world, humanity, the country, the neighbors, the identification of the motives of humanistic behavior, interest in examples of humanism in history, care for people, the lack of egocentrism, a sense of humanism, goodwill.

6. Aspiration for harmonious self-development. The harmonious self-development of highly spiritual personality should be based on the desire to achieve and maintain harmony in the inner world, an interest in his own essence. Openness to the world to internal and external, new views, experience, self-improvement, creation of own world picture, sense of harmony, satisfaction from internal progress, belief in oneself.

7. Aspiration for spiritual and creative self-realization on the basis of self-analysis, self-knowledge through the realization of the professional activity of the teacher, reflects his spiritual culture. A clear awareness and understanding of oneself, a desire in the society to find his own place, interest in spiritual values, examples of self-realization of highly spiritual people, the peculiarities of his life paths, realization of oneself in various kinds of activities, social behavior, feelings of pleasure, internal joy make spiritual and professional self-analysis aspirations of the teacher, which in his implementation allows him to set real professional goals, to direct concrete efforts in accordance with his own efforts of the cause, to be oneself.

8. Aspiration for the acquisition and realization of spiritual experience. As a component of the spiritual culture of the teacher, the culture of experience includes the steady aspiration of spiritual development, the ability to systematize own and universal human spiritual experience, study the continuity of spiritual traditions, the ability to develop existing spiritual teachings, the ability to trust own experiences, make independent moral judgments from the standpoint of wisdom, love, feeling satisfaction from spiritual self-realization.

9. Intellectual and creative aspirations are based on the higher intellectual emotions associated with the activity of thinking, which generate the corresponding intellectual values. Their content in the cultural and professional dimension includes the ability to concentrate and manage attention consciously. Emotional stability, the ability to predict the consequences of own actions, start and finish a certain stage of spiritual growth, the ability to creative analysis of problems, situations of the life, own behavior, confidence, harmony, unity of the world.

10. Aspiration for psychological self-regulation of own emotions, psychological and pedagogical actions, thoughts, reactions, provide the teacher with the development of aspirations and abilities to maintain a largely positive emotional tone, to remain calm in a stressful situation, to be emotionally attractive, to maintain common sense in psychological and pedagogical conflict, to exhibit flexibility of thinking when solving complex psychological and pedagogical tasks. The content of these aspirations includes flexible management of his mood, desires, favorable for others expression of negative emotions and feelings, the programming of his activities, self-control, which in general reflects the psychophysiological features of the teacher.

11. Aspiration for professional and psychological knowledge creative use. We emphasize the aspiration of creativity among the professional and psychological aspirations as the basis and mechanism of creation of new relevant values, which also determines the development of the spiritual culture of the teacher. The achievement of this is facilitated by the desire to test oneself boldly in new affairs, situations, create own and accept other original ideas, unusual images, realize his new ideas practically, accept and use non-standard representations, images, to find non-standard solutions in any living and professional situations.

Five types of statements are developed for each type of aspirations, which reflect the activity dimension of the personality in relation to the structure of the pedagogical activity.

Methods and sample research. On the basis of the methodology "Spiritual culture of the personality of the teacher" the O.I.Motkov's methodology "Psychological Culture" [18] was adopted, which includes 18 statements, which are evaluated by two five-point scales, characterizing the strength of desire and the degree of its implementation in the behavior of six species aspirations that make up the psychological culture of a man.

At the heart of the methodology is the technique of the semantic differential offered by C. Oshud [18, p.139]. The methodology contained two five-point scales: scale A is an assessment of the strength of spiritual and professional aspiration, scale B is the assessment of the degree of his implementation in the pedagogical activity. This reflects the level of awareness of spiritual values, their reflection and creativity by the future teacher. Respondents were asked to assess the strength of their professional and practical aspirations and the degree of their implementation completeness in the professional activity. It was necessary to answer 55 points. The participants selected their response on the scale of possible answers: 1 - very weak aspiration; 2 - weak aspiration; 3 - average strength of aspiration; 4 - high strength of aspiration; 5 - very high strength of aspiration.

2. Results.

The research of the strength of aspirations of each type of spiritual and professional aspirations has allowed to establish a hierarchy of aspirations from a very high strength of aspirations to a very weak one: love for children; creative and spiritual self-realization, harmonious self-development - 5 points; mental self-regulation - 4,6p; intellectual and creative aspirations - 4.2p; spiritual communication, humanistic orientation - 3.6 p.; acquisition and realization of spiritual experience - 3.4 p.; awareness of professional knowledge at the value level - 3.2p; the reflection of professional values, the final use of professional knowledge - 2.5p. The strength of spiritual and professional aspirations average due to the sample = 3.88p, which means the average level of aspirations. We will analyze further the levels of each type of aspirations. As we can see from the table 1, mental self-regulation is the dominant value of spiritual and professional aspirations. Students are trying to overcome the difficulties they encounter, having found themselves in a difficult situation, they do not despair; do not leave the goal.

Table 1

Indicators of strength and spiritual and professional aspirations levels

№	Types of spiritual and professional aspirations	Indicators of the aspiration strength (in points)	Levels of aspirations	Standard limits
1	Awareness of professional knowledge at the value level	3,20	low	1,00 – 3,59
2	Love for children	5,00	pseudo-high	4,66 – 5,00
3	Reflection of professional values	2,50	low	1,00 – 3,59
4	Spiritual communication	3,60	average	3,60 – 4,30
5	Humanistic orientation	3,60	average	3,60 – 4,30
6	Harmonious self-development	5,00	pseudo-high	4,66 – 5,00
7	Creative and spiritual self-realization	5,00	pseudo-high	4,66 – 5,00
8	Acquisition and realization of spiritual experience	3,40	low	1,00 – 3,59
9	Intellectual and creative aspirations	4,20	average	3,60 – 4,30
10	Mental self-regulation	4,60	high	4,31 – 4,65
11	Aesthetic use of professional knowledge	2,50	low	1,00 – 3,59

Indicators of the strength of aspirations for the aesthetic use of professional knowledge, the acquisition and implementation of spiritual experience, awareness of professional knowledge at the value level and the reflection of professional values are at a low level, indicating a conscious assimilation of professional and spiritual knowledge, but the inability to analyze the results of their own activities, are not at the appropriate level, usage of various intellectual means of self-knowledge and self-regulation.

Results of the study of the implementation degree of spiritual and professional aspirations (values) are listed in the table 2.

Table 2

Indicators of the implementation degree and spiritual and professional aspiration levels

№	Types of spiritual and professional aspirations	Indicators of implementation degree (in points)	Levels of aspirations	Standard limits
1	Awareness of professional knowledge at the value level	3,60	average	2,91 – 3,60
2	Love for children	4,50	high	3,61 – 4,50
3	Reflection of professional values	2,62	low	1,00 – 2,90
4	Spiritual communication	3,60	average	2,91 – 3,60
5	Humanistic orientation	3,65	high	3,61 – 4,50
6	Harmonious self-development	4,50	high	3,61 – 4,50
7	Creative and spiritual self-realization	4,00	high	3,61 – 4,50
8	Acquisition and realization of spiritual experience	3,40	average	2,91 – 3,60
9	Intellectual and creative aspirations	4,00	high	3,61 – 4,50
10	Mental self-regulation	4,30	high	3,61 – 4,50
11	Aesthetic use of professional knowledge	3,00	average	2,91 – 3,60

The analysis of the results of the questioning of the students showed that the average indicators of the realization degree of types of spiritual and professional aspirations = 3.74 points, indicating a high level of aspiration implementation.

The most successful is the realization of spiritual and professional aspirations of the humanistic direction, psychic self-regulation, love for children, harmonious development, intellectual and creative aspirations, and creative and spiritual self-realization. Research factors of the implementation degree of these aspirations (values) are revealed at a high level. The respondents confirmed the creative use of professional values in realizing their respective aspirations in practice. The aspiration to reflect professional values has been revealed at the low of implementation degree, which means that the stage of formation of processes of self-knowledge and self-regulation, awareness of standards, regularities, procedures and mechanisms of cognitive processes in professional activity has not been completed yet.

Let's compare the factors of aspirations strength and implementation degree of spiritual and professional aspirations (values). These studies made it possible to find out the relationship between the strength of aspirations and the degree of their implementation in professional activities. (Table 3)

Table 3

Aspiration levels and implementation degree of spiritual and professional aspirations

№	Types of spiritual and professional aspirations	Levels	
		Strength of aspirations	**Degree of implementation**
1	Awareness of professional knowledge at the value level	low	average
2	Love for children	pseudo-high	високий
3	Reflection of professional values	low	low
4	Spiritual communication	average	average
5	Humanistic orientation	average	high
6	Harmonious self-development	pseudo-high	high
7	Creative and spiritual self-realization	pseudo-high	high
8	Acquisition and realization of spiritual experience	low	average
9	Intellectual and creative aspirations	average	high
10	Mental self-regulation	high	high
11	Aesthetic use of professional knowledge	low	average

This comparative analysis made it possible to find out the degree of correlation between the strength of aspirations and the degree of realization of the aspirations of spiritual and professional values. Consequently, the reflection of professional values, psychic self-regulation and spiritual communication functions harmoniously.

However, one should pay attention to the education of professional values reflection, which is necessary in the formation of a specialist. Improved indicators of the implementation degree of the professional knowledge aesthetic use, intellectual and creative aspirations, the acquisition and implementation of spiritual experience, humanistic orientation and awareness of professional knowledge at the value level showed the significant impact of the external factor of self-realization.

That is, the realization of aspirations (values) is not limited only by professional activity, but occurs in creativity; education, and social activities, consideration of these levels has allowed us to find out how the attitude of the future teacher to oneself, to other people and his pedagogical activity is formed.

The motivational and semantic orientations of students, their interests, intentions, which are internal determinants of acts and actions, were revealed during the study. In most students, the ability to self-development is active, which indicates the great potential of future professionals. At the same time, together with progressive tendencies, there are destructive phenomena, which are caused by personal and psychological determinants. The harmonious combination of the strength of aspirations and the degree of their implementation provides a perspective orientation to the spiritual and professional formation, where the emotional and volitional experiences, the creative level of professionalism are dominant.

These studies have shown that the spiritual determinant of a future specialist is defined by the close relationship between the teacher and the society, his social group, staff, and other people. A beginner teacher needs to pay attention to the growth of the role of the subjective factor in the formation of the personality qualities of the teacher.

Conclusions.

The greatest interest, based on our study, is the problem of an effective relationship between the strength of aspirations and the degree of aspirations realization in the spiritual and professional formation. In our opinion, the valuable aspects of the spiritual formation of a teacher are to determine the conformity of the strength of aspirations and motivation at each stage of his professional development and the degree of realization of these aspirations. We are convinced that spiritual and professional values are formed under direct social influence, but also largely determined by the world perception of the person himself.

To determine this correspondence with the intrinsic characteristics of the teacher it is worthwhile in future studies in detail and comprehensively to consider the levels of formation of the self-image of the educator-teacher.

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PROFESSIONAL DEVELOPMENT AND CREATION OF THE PERSONAL IMAGE OF THE MODERN FOREIGN LANGUAGE TEACHER

Abstract. *The article discloses the features of professional development and creation of the personal image of the modern foreign language teacher, which is a continuous process of personal and professional growth, the result of the development of globalization and information processes. It is stressed on the importance and necessity of changes in the professional activity of the teacher, which is related to the formulation of new goals and its achievement with the help of innovative teaching methods. It is proved that the present time demands from the foreign language teacher the pedagogical orientation, self-determination, self-organization, creativity, initiative, professional mobility, and the ability to professional self-development. Self-education is defined as the highest form of self-improvement, the purposeful process of developing own abilities in professional activity, conscious improvement of own personality as a professional. It is stated that the teacher's professional development is influenced by the features of his/her personality, general and professional competence, which involves a combination of knowledge on didactics, psychology and methods of teaching a foreign language, linguistics, use of various modern innovative technologies and its means. The professional competence of the teacher is an essential characteristic of professionalism. The features of forming the professional development of the teacher are disclosed that carried out by computer educational programs, translation programs, test environments, expert systems, information systems, electronic sources of information, and attention is paid to the fact that pedagogical experience, professional development of the teacher is the result of his/her innovative pedagogical activity. It is determined that the teacher just have to constantly improve his/her personal qualities, thus creating his/her own image. The creation of the image is a continuous process, the formation of which belongs to the teacher himself/herself. The views of scientists on this issue are described and it is stated that the problem of professional development of the teacher is actual in many countries of the world and is analyzed in scientific and pedagogical works, both of domestic and foreign scientists.*

Introduction.

Professional development and creation of the personal image of foreign language teacher is a complex of various types of professional activities aimed at increasing knowledge, improving abilities and skills, enhancing own culture of foreign language communication; the ability to self-knowledge, self-expression, self-regulation and control of own emotional state; a sense of satisfaction with the process of development and implementation of professional competence; a high level of communication with the entities of the teaching and educational process, also using means of non-verbal communication, having an attractive appearance. The comprehensive competence of the teacher contributes to the development of perception of the world by the students, enriches the inner world, provides and creates an understanding of the dialogue of the cultures of the peoples of the world.

The process of foreign language communication and the content of the material offered by the teacher at the foreign language lessons should contribute to the overall comprehensive development of student youth. The foreign language teacher uses modern programs that require initiative, autonomy, imagination, self-discipline, collaboration, and development of student research skills.

Therefore, it is important for each teacher to determine the priorities in pedagogical technologies, taking into account the set goal of education and in order to create and develop a person with high language culture. Modern foreign language teacher performs not only educational, information, advisory, developmental functions, but also influences moral and spiritual development of student youth. The foreign language teacher of a higher educational institution has to deal with the working out of lectures, educational and methodological complexes, writing of scientific articles, textbooks and manuals.

The main responsibility of teachers is not only to be acquainted with the general principles of the environmental impact on the actual experience, but also to identify the specific factors that contribute to the acquisition of such knowledge that leads to development. Above all, they must know how to use the existing physical and social environment in order to take from it everything that can be used to create useful knowledge [9, p. 38].

Development is an integrated and active approach to the professional improvement associated with the professional activities, knowledge, values and behavior using a wide range of intensive new technologies. For training and development, such strategies and methods are used that are intended to help each specific person to realize his/her potential. Development is particularly intensive in the implementation of self-education and self-improvement [20, p. 60].

The professional development and creation of the personal image of the modern foreign language teacher is a continuous process of personal and professional growth and the result of the development of globalization and information processes that created the conditions for the emergence of new innovative pedagogical technologies and changed the methods of foreign language teaching. In connection with this, the productive activity of the teacher is important, which is related to the formulation of new goals and their achievements with the help of new teaching methods.

So, it should be noted that “The process of formation of professional preparedness lasts throughout human life. At each stage, it is filled with new content, new organizational and pedagogical forms and methods, new needs and relevant approaches to the integration of individual, professional, and social aspects of life” [17, p. 46]. The teacher, like nobody else, must look into the future, and based on the very nature of his/her activity, he/she must think about own present work in the light of what it will bring in the future, he/she must think about the future that is associated with the present time [9, p. 69].

1. Presentation of the main material.

Knowledge today is determined by the main value of both human and society. The modern information society needs qualitative education, conditioned by scientific and technological progress, the development of new technologies, globalization and informatization, which changes traditional perceptions of the world, life, values, future.

The importance of education was recognized by many scholars and philosophers. Thus, Kant wrote that "the greatest and most difficult problem to which a man can devote himself is the problem of education" [8, p. 11].

The present time demands from the foreign language teacher the pedagogical orientation, self-determination, self-organization, creativity, initiative, professional mobility, the ability to professional self-development and self-improvement, the possession of a wide range of methodological means, a profound knowledge of the language that he/she teaches, that is, the level of foreign language knowledge, which students will receive, depends on his/her teaching skills. Therefore, the new significant attention is paid to the professionalism and self-improvement of the teacher of the higher educational institution.

The professionalism of the foreign language teacher demands the qualities that ensure his/her mobility, personal responsibility for continuous professional development, the creative nature of practical activity, which contributes to raising the level of his/her culture of foreign language communication and requires taking into account ethno-cultural experience, as well as knowledge and understanding of the processes of interaction between cultures and peoples.

According to the Encyclopedia of Education, professionalism (Latin word "profiteer" which means "I declare this my case") is a set of knowledge, behavioral skills and actions that indicate professional training, education, ability of a person to perform professional functions. Professionalism is the readiness for the competent performance of functional duties formed in the process of training and practical activity; level of excellence in professional activity. The development of professionalism is driven by the increasing complexity of tasks. The speed of adaptation to new conditions and requirements is the basis for the achievement and development of professionalism [4, p. 742]. And "self-improvement" "Great explanatory dictionary of modern Ukrainian language" by V. Busel defines as "the improvement of oneself, own professional skills" [6, p. 1097].

Professional self-improvement is a conscious professional activity of the teacher in the system of his/her continuous pedagogical education, which aims at raising the professional level, professional self-realization, further development of professionally significant qualities, increasing the efficiency of the educational process, personal and professional development [5, p. 37].

Self-improvement performs the following functions: improvement, enrichment of teacher's knowledge (subject, methodological, didactic, educational, psychological, ethical); development of outlook, professional-value orientations, beliefs that are relevant to the tasks

of society and higher education; development of motives of creative activity (enthusiasm for the subject, need for self-realization); development of persistent moral qualities of the person (conviction, humanism, pedagogical optimism, adherence to principles, kindness); development of modern style of pedagogical thinking, such features as systematicity, concreteness, flexibility, economy, selectivity, sense of measure; the development of professional skills, pedagogical techniques, executive mastership (the technique of verbal and non-verbal communication, that is, the language technique, the technique of communication with students, the skills of using various technical means of training, including complex technical means such as computer, video equipment); development of the culture of emotions and volitional manifestations of the teacher, self-regulation of activity; the development of reflexive skills [5, p. 38].

Professional pedagogical self-improvement is manifested as the desire to independently broaden knowledge about the areas of professional development and ways to improve the quality of teaching; to an independent professionally grounded goal-setting, reasoned decision-making; the desire to be able to find an access to the necessary information resources; to self-determined performance of everyday professional duties, determined by the position; to an analysis of own activities and behavior; to manage own emotional state. An educated teacher is one who feels the need to constantly increase own knowledge, develop mental abilities, can comprehensively use the available intellectual and physical capabilities, and professional skills [5, p. 38].

Self-improvement as a form of professional development of teachers is the most productive way of not only mastering knowledge, but also the formation of beliefs. Correctly organized and purposeful work of the teacher allows to develop skills and abilities of deep comprehension of the essence of problems, to master them practically. It teaches to analyze and generalize the facts of life, to be equipped with scientific methods of cognition and transformation of reality. Cognition opens the way of knowing the truth, since the categories and principles of philosophy are a methodological basis for understanding the content of the laws that operate in the educational field and form the starting point for a broad vision of the areas of pedagogical research [12, p. 37].

The success of the teacher's professional development is determined by such key factors as the need for organizational and individual changes; strategic and tactical planning of the professional development process; provision of programs of development integration; provision of systematicity programs; learning of professional development programs; cooperation between educational institutions [13, p. 122].

The forms of professional development of teachers include applied research. According to O'Hanlon, an applied research is "a process of research, critical analysis and activities aimed at improving the quality of the real situation, which forms the focus of research" [15, p. 181].

The effectiveness of applied research, as a form of professional development of teachers, is ensured by the following factors: inquisitiveness as a base, which allows to explore the teacher's own world; the focus on improving the teaching and learning process; the focus on comprehension of actions and improvement of conditions of the educational process [12, p. 43].

The teacher improves own qualification with the help of planned training (advanced training) in institutes of advanced training and improvement (postgraduate education, the purpose of which is to support the professional development of the teacher at the level of modern requirements, the formation of his/her innovative ability). The system of professional pedagogical education is in constant search for ways to enhance the professionalism and quality training of the foreign language teacher. The main mechanisms for improving the quality of professional development are the introduction of the certification renewal process; improvement of the program of continuous professional development of the teacher; introduction of new standards of evaluation; development of the algorithm of cooperation between the teacher and the student; integration of research in the field of continuous professional development of the teacher, stimulation of introduction of new information technologies in the process of his/her preparation and retraining.

Researchers on these issues (V. Hrynova, I. Ziaziun, L. Kondrashova, O. Prokopova, A. Sbruieva, O. Temchenko, A. Kharris, etc.) prove the necessity of developing abilities and managing personal self-development. The scientists point out that the components of it are self-education and self-improvement.

Professional self-education is a systematic and purposeful educational activity of the teacher, the aim of which is to meet the social needs of students' education, in overcoming the contradiction between the rates of aging and the pace of their renewal. The essence of self-education is to compare own experience with the experience of pedagogical science. In the process of self-education activity, the creative potential of the teacher's personality is accumulated. The development and implementation of creative qualities depend on personal qualities of the teacher. K. D. Ushynskyi [19, p. 87] wrote: “Only a personality can influence the development and determination of other personality, only by a character other character can be created”.

Self-education of the teacher is effective not only by the didactic, methodological, educational and other kinds of activities, but also by the ideas of the comprehensive development of the specialist as a personality. Self-education activity is successful only when it is well-aimed.

The goal of self-education is the comprehensive development of the teacher's personality in order to ensure the high quality of education, bringing-up and development of students. Pedagogical self-education is in the enlarging of knowledge acquisition, creative mastering of the teacher's pedagogical role for its further implementation. Self-education is understood as the simultaneous acquisition of knowledge and the improvement of own

qualities, the development of skills and abilities of independent work, the systematic cognitive activity of the personality, as well as the purposeful independence of teachers in improving and mastering the new psychological and pedagogical, methodological knowledge that is necessary in the professional activity of the teacher [5, p. 38].

Self-education is considered as a condition for self-cultivation of the teacher's personality. Self-cultivation is defined as the highest form of self-improvement, the purposeful process of developing own abilities in professional activities, conscious improvement of own personality as a professional. The result of self-cultivation is the creative development of personality, its self-realization. Self-cultivation of professionally important qualities as a purposeful process should be carried out according to the corresponding program and with the help of appropriate methods – self-knowledge, self-analysis, self-evaluation, self-programming, self-organization, self-control. Among the professionally important qualities, at which self-cultivation is aimed, communicative and organizational skills are noted [5, p. 38].

The teacher's professional development is influenced by the properties of his/her personality, general and professional competence. It depends on how the teacher understands the goals of teaching and bringing-up, uses the acquired knowledge, creating the appropriate conditions for the teaching of students.

The professional competence of the foreign language teacher involves a combination of knowledge of didactics, psychology and methods of teaching a foreign language, linguistics, the use of a variety of modern innovative technologies and their means.

Many domestic and foreign scientists (T. Vakhrushcheva, I. Dychkivska, L. Dovhan, M. Dudzikova, I. Ziaziun, R. Kvasnitsa, D. Laienz, L. Pukhovska, etc.) dealt with the problem of theoretical substantiation, the search for innovative ways of developing the professional competence of teachers. The scientists emphasize that pedagogical competence of the teacher is the highest level of pedagogical activity, which is manifested itself in the constant improvement of pedagogical self-determination, self-organization, and creative activity.

For example, I. Dychkivska draws attention to the fact that pedagogical experience, professional improvement of the teacher is the result of his/her innovative pedagogical activity, which structurally covers outer (goal, means of achievement, object of influence, subject of activity, result) and inner (motivation, content, operations) components. Like any pedagogical activity, it performs gnostic (cognitive), design (perspective planning of tasks and methods of solving them), constructive (cooperation of the teacher and pupils), communicative (interaction of the teacher with students, colleagues), organizational (step by step actions of the teacher and students) functions [3, p. 233].

The main features of innovative pedagogical activity are personal approach (focus on personality, humanistic nature), creative, research and experimental character, stable motivation to find new in the organization of the educational process. The involvement of

the teacher into innovation activity may be the result of a variety of factors. Often, the reason for this is the dissatisfaction with methods, the results of personal work, the development of new knowledge, comprehension and a qualitatively new vision of a personal life mission, sometimes a creative insight, which is usually the result of a long-term search and analysis got on this way. The external organizational influence is also effective to a certain extent, i.e. purposeful use of various forms of involving the teacher to innovation activities, which include the following: organization of an ongoing scientific seminar; internship of teachers at research institutes and higher educational institutions; pedagogical councils, "round tables", discussions; business games for generating new pedagogical ideas; creative pedagogical activity of teachers in methodological associations; generalization of own experience and experience of the colleagues; special courses of advanced training; independent research, creative work; participation in common experimental and research work; participation in scientific and practical conferences [3, p. 234], as well as using such online tools as webinars.

The use of webinars contributes to the development of professional improvement of the foreign language teacher, enhancement of methodical culture as regards the issues of using the knowledge of new innovative technologies, enlarges pedagogical knowledge, increases the level of motivation for professional activities. For successful e-learning, it is important to know all the modern tools concerning the implementation of information and communication technologies in the learning process, how can they be used for the transfer of knowledge at a distance (distance learning) [11, p. 41].

Among the technical means of foreign language teaching, a computer is an important component of the teaching process. The process of professional development of the teacher is carried out by computer training programs, translation programs, test environments, expert systems, information systems, electronic information sources. The result of the use of a computer is the providing of a creative atmosphere of communication and the change the very process of teaching a foreign language: overcoming outdated, inefficient forms, methods, techniques, teaching aids.

The teacher must have skills in working with pedagogical sites, be able to navigate English-language pedagogical sources, read scientific papers in a professional direction, find new sets of methods and practices of foreign language teaching. Today it is impossible to imagine the work of the foreign language teacher without the use of modern computer technologies, which became one of the new means of teaching, control and management of the educational process. Internet resources are the convenient way to get acquainted with the culture of other countries and peoples, communication, information, inexhaustible source of educational process.

The computer allows to communicate virtually. Virtual reality creates new needs, desires, opportunities. Therefore, a person in virtual reality is dealing with an illusion. A person, in such a reality, finds a new image [2, p. 133].

Determining the emotional-sensory component: the creation of virtual pedagogical interaction should focus on the pedagogical skill, which should be interpreted as the teacher's ability to create a special world. It is this that manifests the ability of the foreign language teacher to create a virtual pedagogical interaction in a virtual learning foreign-language environment [16, p. 110].

It should be noted that modern electronic means, both innovative and interactive, play an important role in the professional development of the foreign language teacher [2, p. 133]. Education responds to new civilizational challenges, takes into account trends, perspectives of human development. Education produces new knowledge and trains humanity to use it in professional and everyday life.

With the development of information and communication technologies, new technologies of teaching (distance learning) appeared, the conditions of professional activity of the teacher (a tutor) changed, his/her role (an expert, a guide, a leader) and functions (controlling, methodical, communicative, motivational, managerial, diagnostic, planning) were transformed.

Therefore, it should be noted that the emergence of new technical means requires from teachers to develop fundamentally new methods of teaching and education (own distance courses and programs, designing delivery of courses for students with storage of their information and ensuring the perception activity, management of virtual groups), as well as additional responsibilities and mastery a range of new skills. In particular, the teachers have to learn how to hold teleconferences, seminars through network or satellite communications, to master the basics of programming.

The training of teachers on working with new innovative technologies involves widespread use of computers, audio- and telecommunications, etc. This indicates that the teaching and methodological work of the teacher involves getting to a new level by creating, in cooperation with specialists in the field of pedagogy, psychology and information technologies, the new generation of educational materials.

Innovations allow organizing the learning process so that all participants of the learning process take part in it. It opens the possibility of self-knowledge, self-actualization, self-improvement of both teachers and students [1, p. 35].

The widespread introduction of information and communication technologies allows the foreign language teachers to use new teaching tools that would correspond to professional experience and facilitate the creation and development of professional culture.

The issues of scientific approaches to the creation of professional culture were considered by such scientists as I. Bekh, H. Vasianovych, V. Hrynova, V. Kyrychok, A. Lymar and others. The analysis of studies shows that the reflection of the teacher’s professionalism is his/her pedagogical culture, which is defined as the totality of the teacher's personality culture, professional knowledge and ability to apply this knowledge in pedagogical activity.

The professional culture of the foreign language teacher, its constituent functions and creation, was studied in the works of A. Masliuk, I. Kostikova and others.

I. Kostikova, a foreign language researcher, believes that the foreign language teacher receives the professional culture "through familiarization with various methods and practices of foreign language teaching in the field of didactics, methodology, psychology, linguistics, through the development of readiness and preparedness for teaching by involvement of professionally oriented knowledge and management of educational activities" [10, p. 74].

As the teaching and educational process takes place on the background of communication, the most important aspect of the professional competence of the foreign language teacher is his/her foreign-language communicative competence. Foreign-language communicative competence facilitates implementation of practical skills of communication with representatives of other cultures. Changes in society have led to increased communication between people of different nationalities.

The teacher has to do a lot of self-work, developing such qualities that lead to constructive communication in the teaching and educational process. Knowledge, abilities, skills that the personality acquires and produces are unquestionably very important. Along with this comes the concept of communicative competence, which is determined by many factors and is a multidisciplinary phenomenon.

In the process of pedagogical activity, the foreign language teacher must take into account different aspects of communication, its features. Nevertheless, in order to become a master of communication, one must still have qualities important for interpersonal relations. This list of qualities was established by the Polish psychologist Jerzy Mellibruda. It should be a kind of benchmark for the teacher: what to strive for, which features to develop, cultivate in oneself. So, qualities that are important for communication, are the following: *empathy* – the ability to see the world through the eyes of others, to perceive their actions from their positions, the ability to tell others about own understanding; *benevolence* – the ability not only to feel, but also to show people own benevolent attitude, the ability to accept, even if you do not approve, their actions, readiness to support; *authenticity* – the ability to be natural in a relationship, be yourself, not to hide behind a mask; *concreteness* – abandoning the general considerations, ambiguous indistinct remarks, the willingness to answer questions unambiguously; *initiative* – the inclination to an active position in relationship, the ability to establish contacts by oneself, to exhibit activity, not to wait for the activity of others; *directness* – the ability to speak and act directly, an idea of the attitude of others and an honest demonstration of own attitude; *openness* – sincerity, ability to talk about own thoughts and feelings; *confrontation* – the ability to communicate with other people with full awareness of own responsibility and interest.

Knowledge about the features of the communication process allows the foreign language teacher to navigate in communicative situations, to predict own behavior and realize the potential opportunities in foreign communication activities. However, only knowledge is not enough, it is necessary to develop and consolidate communicative skills on its basis [18, p. 87].

An indispensable condition for a personal directed communication of the teacher is to have a great command of language. The language of the teacher should be distinguished by the following features: addressing to the audience, focus on solving certain educational and teaching goals, activity, inner strength, expressiveness, imagery, simplicity, conciseness, logical harmony (is developed aiming at dialogue, both open and inner ones) [7]. That is, it is important for the teacher not to miss opportunities for positive interaction with students.

For constructive communication, which influences the development of communicative skills and qualities, it is important for the teacher to know and take into account both own individual features and those of students, as well as to possess methods of constructing optimal strategies of pedagogical influence. For this, the teacher must focus on the development of communicative qualities, the ability to assess adequately interpersonal relationship [18, p. 87].

Interest in the personality of the teacher is a way of activating interest in the subject. The image of the teacher should inspire. Regardless of the level of professional training of the teacher, he/she is simply obliged to constantly improve own personal qualities, thus creating his/her own image. The image of the teacher is an emotionally colored stereotype of perception of the teacher's image in the minds of students, colleagues, social environment, and in the mass consciousness. When creating the teacher's image, real qualities are intertwined with those that are attributed to him/her by people around [14, p. 53].

Every teacher should work on a personal image. The image influences not only the way others perceive the person, but also on the own state of health and mood, and how he/she perceives himself/herself. Creation of a positive image of the teacher is carried out primarily in specific situations of educational and professional activities.

For the creation of a teacher's image, much more is needed than for that of specialists of other professions, because there are the teachers who create the image of their students. The teacher is a reference model for them. Each teacher must be a vivid person, as using own personality he/she catches the interest of students, develops interest in his/her subject. The inner coincidence of the personality, inner self, with the profession is the main component of the pedagogical image, because the ability to have appeal and attract other people is the necessary quality in professional and personal contacts. The teacher teaches students and when he/she is silent, teaches by own appearance, behavior, attitude to students. Verbal and non-verbal means of communication are very important components of the image.

The teacher's image is not only a visual image, but also gestures and manners, and sociability, and pedagogical tact, and linguistic culture, and love for student youth, and pedagogical insightfulness, and many other qualities that are components of a professional pedagogical image [14, p. 54].

The image was studied by scientists, pedagogues, psychologists (P. Bird, L. Brown, P. Gurevych, L. Danylchuk, F. Davis, V. Diupre, etc.) in many countries of the world, whose works are devoted to the questions of business image, the creation of the image of the external view of a person, a pedagogical image, a visual image of a modern teacher. Scientists emphasize that the image can not be given forever. The creation of an image is a continuous process, the development of which belongs to the teacher himself/herself.

The teacher influences students with a set of interconnected elements of appearance. The culture and technique of movements, clothes, culture and body care are all components of the appearance. Each element in particular has several components, which form the system-generating integrity. Thus, the culture of speech includes intonation, voice, diction, breathing, voice pattern and speed, logical structuring of speech, flexibility of speech, etc. The culture and technique of movements contain a posture, gait, gestures, plasticity, facial expressions, pantomimicry. Culture and technique of care for own hair, doing hair, choosing clothes and shoes, jewelry, accessories, perfumes. A special inner illumination, transmitted through the sight, gesture, posture, smile – all this makes the teacher unique. That is, the appearance depends on the individual personality, on his/her internal pedagogical culture and is inherent only to him/her. In this way, the image of the teacher is created, which can be both positive and negative. Each teacher, regardless of sex, age, inborn features, is able to create his/her own unique personality [14, p. 55].

The current prospect of professional improvement of the teacher's personality, as well as his/her self-realization, is the development of career tendencies. The professional career of the teacher combines his/her success with the stages of personal development, covering all spheres of life. “Professional career is a consciously chosen way of advancement without changing own profession, the path to the professional top of career, professional self-sufficiency and asserting oneself in society” [13, p. 100].

Thus, pedagogical activity is a kind of art that requires intuition, creativity, improvisation and expressiveness, and involves a departure from rules, formulas and algorithms [13, p. 45].

The problem of professional development of the teacher is relevant in many countries of the world and is analyzed in scientific and pedagogical works, both of domestic and foreign scientists. It is noted that in a globalized and informatised society for the successful realization of its professional role, a teacher of a higher educational institution needs to be provided with personal constant professional development.

Conclusions.

The analysis of scientific works and studies shows that the problem of professional development and the creation of a personal image of the modern foreign language teacher is at the center of attention of scientists, educators and psychologists. Thus, a teacher who possesses a sufficient and high level of pedagogical competence, pedagogical culture is more active in the realization of professional search activity. The professional development of the teacher finds expression in self-education and self-cultivation activity, which manifests itself in the enlarging of pedagogical knowledge. In addition, the introduction of innovative technologies in the educational process of teaching a foreign language requires the continuous self-improvement, development of own personality from the teacher. Professional self-improvement is a key indicator of the improvement of the educational process. The main emphasis is on self-development of the teacher. Thus, the social and cultural situation requires changes not only of individual forms and methods of pedagogical activity, but also consciousness and behavior of the teacher himself/herself, the creation of own image.

Perspective directions of this research are deepening of work on improvement of professional development of the foreign language teacher with the creation of more specific methods, approaches, forms, models and monitoring systems. Further introduction of innovative pedagogical technologies, their combination with classical traditional technologies into the work of the teacher. Constant analysis and systematization of the views of scientists, both domestic and foreign, the opening of new opportunities for professional development and the creation of a personal image of the modern foreign language teacher.

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IMPLEMENTATION OF INFORMATION AND COMMUNICATION TECHNOLOGIES IN TEACHING A FOREIGN LANGUAGE FOR PROFESSIONAL COMMUNICATION

Abstract. *The article analyzes and generalizes the factors of successful training of modern specialists who are ready to gain means of expressing professional needs in a foreign language, to expand their awareness and professional competence, to provide diverse socio-cultural and professional interaction, to compete on the world market of labor and services. It is noted that a foreign language is an integral part of the professional development of competitive specialists in any field. It was emphasized that information and communication technologies are a powerful tool in the formation of their foreign language competence. The authors note that methods of implementing of information technologies depend on many factors and are determined by specific learning conditions: the configuration and capabilities of available computer and telecommunication equipment, quantitative and qualitative composition of students' staff, accessible software, teacher qualification, etc. It is established that the use of information and communication technologies facilitates the modeling of communicative activity conditions, gaining of lexical and grammatical skills, increasing the amount of speech exercises, and lets transfer linguistic material to other types of speech activity. The article analyzes some educational platforms, mobile apps that can be used to learn foreign languages and to assess the quality of students' knowledge. A conclusion is made about the influence of information technology tools on the creation of foreign language environment as one of the main motivating and stimulating factors in the process of foreign languages learning, which was previously held solely on the teacher's skill.*

Introduction.

Foreign language takes one of the most important places in the professional training of specialists of the new generation. Their education is based not only on the diverse knowledge they already possess, but also on the ability to receive and process new information according to academic needs. Therefore, the requirements for up-to-date specialists in any professional field are requirements for a competent person with foreign language training and advanced independent thinking. A modern specialist in the process of vocational training acquires the ability to apply foreign experience in his profession.

This is facilitated by mastering a certain lexical and grammatical minimum, the ability to conduct a dialogue in a foreign language, use the rules of speech etiquette, read literature on specialty, translate texts without a dictionary, make up annotations, write essays and business letters.

Therefore, it is possible to claim that high-quality professional foreign language training guarantees future specialists the opportunity to master the means of expressing professional needs in a foreign language, to increase their awareness and professional competence, to provide diverse socio-cultural and professional interaction, and give a chance to compete in the world market of labor and services.

It is necessary to note that the foreign language as a general subject has certain peculiarities, namely: when studying a foreign language, students not only learn certain lexical and grammatical material, but also acquire skills of speaking, reading, writing, listening, without which it is impossible to use a foreign language as a means of communication. According to the leading pedagogues, foreign-language speech mechanisms are formed in foreign language classes. Speech automaticity, skills and abilities, as well as the mechanisms of predictive reflection of utterances, efficient memory, aural and visual perception of speech, semantic structuring of statements are developed in speech, writing, reading and listening.

Foreign language influences the content and formation of the conceptual foundations of many special disciplines, since the thought is always reflected in the language. With the help of a foreign language, clarification of terminological and conceptual differentiations and the content of professionally relevant disciplines come about, which promotes the development of professional intelligence, skills of communication in the professional field.

The close attention to the problem is due to the fact that the command of a foreign language not only increases the level of humanitarian education of young people, but gives them the opportunity to gain experience in communication, promotes their activity, forms the need for self-development, provides a conscious and controlled mastery of educational material integrating knowledge. And since knowledge of foreign languages is indispensable nowadays, every teacher has to solve tasks concerning the choice of the optimal method of teaching in order not only to bring it to the appropriate standards, but also to make this process exciting.

Informatization of education and related to it abilities of using information and communication technologies (ICT) in the educational process leads not only to changes in organizational forms and methods of learning, but also to the emergence of new teaching methods.

Due to the informatization of educational process, the scope and content of educational material is changing, a restructuring of curriculum programs takes place, which leads to a change in the structure and content of the courses, and, consequently, the structure and content of education, which in turn leads to changes of certain teaching methods.

Implementation of opportunities of modern ICTs in the learning process and, consequently, the expansion of the range of educational activities, lead to a qualitative change in the didactic requirements to the means of training. Therefore, the teaching of a foreign language for professional communication with the use of ICT should become one of the priority tasks of higher pedagogical education.

1. Review of Literature.

The general issues of professional training were studied by I. Beh, V. Galuzinsky, S. Goncharenko, M. Yevtukh, I. Zyazyun, N. Nychkalo, M. Smetansky, G. Tarasenko, V. Shtyfurak and others. The methodical support of a foreign language teaching for professional communication is highlighted in the works of N. Bibik, I. Bim, I. Zimnaya, S. Nikolaeva, O. Ovcharuk, A. Petrova, O. Pometun. Pedagogical and theoretical aspects of the use of ICT in the educational process are investigated in the writings of V. Bykov, I. Bogdanova, I. Bulakh, B. Gershunsky, R. Gurevich, O. Dovgyallo, M. Zhaldak, J. Zhuk, M. Kademiya, V. Kluchko, G. Kozlakova, M. Lapchik, L. Morskaya, O. Podzigun, E. Polat, I. Robert, I. Shahina, L. Shevchenko and others.

Studies show that the quality of a foreign language teaching for professional communication requires improvement, because of poorly developed methodology of foreign language teaching of students of non-linguistic specialties; lack of modern teaching aids; unclear orientation of a foreign language for future professional activities, etc. At the same time, it is important to take into account that the technology of teaching students a foreign language for professional communication should ensure the achievement of the planned quality of foreign language proficiency within their specialty, including the development of linguistic and intercultural competencies.

Many researchers note that the use of ICT training serves as a powerful educational, methodological and didactic incentive for improving the quality of the learning process. Studying the problem of teaching a foreign language for professional communication, representatives of various branches of modern science use ICTs that allow a person to find his bearing in life, facilitate the study of foreign language teaching material, open the way for the development of thinking, cognition, intelligence, increase the motivation of teaching, expanding teacher's pedagogical capabilities, promote his professional growth [1, 5, 9, 10].

Teaching a foreign language for professional communication allows to ensure the orientation of each component for the successful formation of the personality of the future specialist, his knowledge, skills, creative thinking, development of professional abilities. Professional bent is one of the important characteristics of the course of a foreign language as a discipline, called together with other sciences to form the professional education of a student. Without a doubt, the professional bent of the learning process depends on the organization of educational activities. This process is influenced by internal (psychological features of the student, motivation, his preparedness) and external (assessment of his activities by others) psychological and pedagogical conditions.

The study of scientific literature suggests that the process of implementing the principle of professional bent in higher educational establishment should include the study of authentic material related to the specifics of the professional bent of future specialists. The training of oral and written speech should be related to the development of foreign language competence for conducting conversations according to a specialty, exchange of experience with foreign colleagues, annotation and referencing of scientific professionally directed text [8, p. 104-105].

Teaching a foreign language communication must be professionally directed, as it provides the formation of abilities and communication skills in the field of the future profession. The subject-subjective relations based on communicative exchange, in the process of a foreign language learning enrich the student's personality, accumulate experience of communication, realize certain life and professional goals. According to the personality-activity approach and strategy of cooperation, in the center of training there is a person, the purpose of education and breeding must be harmoniously combined for the purpose of both life of the person and the life of society.

2. Presentation of the main material.

The use of active learning methods in foreign languages teaching, which allow the audience to experience communication, skills of a professional approach to solving educational tasks, is extremely important for stimulating students' activity, the need for self-development. Activity methods involve students in solving problems that are as close as possible to professional practice. In this case, it is important that not only knowledge is assessed, but also creative autonomy, professional and ethical aspect are taken into account, that is, students solve the educational task according to their moral convictions, showing the knowledge of a foreign language, special and humanitarian disciplines [3]. Thus, learning a foreign language for professional communication contributes to the improvement of knowledge, the development of new desires, professional experience, individual psychological characteristics of the personality.

Sufficiently successful in learning a foreign language for professional communication a problematic approach is used that promotes foreign language awareness and the development of such professional skills, abilities, personal qualities as benevolence, creativity, imagination, ability to support conversation and dialogue, make independent decisions and predict their consequences, to solve non-standard problems.

Problem approach in a foreign language learning can be used for all types of speech activities (oral speech, reading, writing). At each stage, a system of exercises based on a problem situation can be implemented. Doing these exercises, information and communication technologies can be used, which allow to diversify variants of problem situations, search for their solution and presentations of their result [11, p. 271].

Summing up everything mentioned above, it can be stated that foreign language as a discipline, which is part of the structure of the content of higher education, has high

potential for the formation of important personal qualities of future specialists. Successful mastering of a foreign language for professional communication stimulates the process of self-improvement, provides professional growth.

Practically arranged classes of teaching a foreign language for professional communication facilitate the improvement of student's professional level based on the developed language competence. Integration of foreign language into the system of professional training of future specialists widens the possibilities of foreign communication, creates a solid basis for modernization of professional training in higher educational institutions.

One of the leading trends in the development of modern society is the use of ICT for professional training. The potential benefits of ICT are evident: the ability to build training program which are modular, easily adapted to the needs of a specific user, independent of place and time of training, the ability to update courses quickly, etc.

Computer technology is not just a smart and diligent assistant of the teacher that is ready to respond to any of his command, but also becomes an active participant in the educational process, induces the teacher to change the work in the class, to look for a more dynamic and flexible method that allows him to apply ICT capabilities.

A specific feature of mastering a foreign language is, firstly, the development of language, taking into account the psychological factors of communication, and, secondly, the mastering of linguistic structures, means of communication. Involving a computer as a teacher's assistant in the learning process allows optimizing of both aspects by assigning routine work of gaining skills to a computer, and leaves the teacher the main task – the organization of active communication in the class.

The use of ICT training helps to integrate various forms of activity and provides a process for learning a foreign language more intensively. Combining computer training with textbook tasks makes possible to achieve a high level of grammatical and lexical skills.

Many modern studies have shown that the use of ICT training helps:

- improving the efficiency of the educational process, the effectiveness of mastering the skills of getting independent knowledge and its demonstration;
- mastering the general methods of cognition and the strategy of learning the educational material;
- independent choice of the mode of educational activity, organizational forms and methods of teaching;
- expanding the outlook;
- development of creative personality, formation of communicative skills, oral and written language;
- the transition from the traditionally passive form of information perception by students to its active search and deliberate manipulation of it [2; 6; 13].

Studying English, ICTs aim to create the conditions for the formation and development of communicative skills and language skills of students. They allow moving from reproductive forms of learning to independent, creative work, helping to form a communicative culture of students, and develop skills to work with different types of information and its sources. With the help of ICT, one cannot just familiarize with the educational material and its reproduction, but also provide a process of learning, comprehension, self-regulation and self-development.

The effectiveness of ICT use is largely stipulated by the didactic features that teachers cannot ignore. The latter include:

- high informational richness of these tools;
- opportunity to overcome (subjectively change) real time and spatial relationships;
- the possibility of deep penetration into the essence of phenomena and processes under study;
- demonstration of objects and phenomena under consideration in their development, dynamics;
- realistic reflection of reality;
- the variety of figurative techniques,
- emotional diversity and richness [7; 10; 11].

Information and communication technologies of teaching influence on the students in different ways: firstly, the student can get much more teaching material than when communicating only with a teacher; secondly, the student develops the ability to work with information, make optimal decisions; thirdly, such technologies prepare the student to become a personality in the information society.

Information and communication technologies help to improve the quality of teaching and learning providing opportunities for rapid analysis of information and its feedback. However, it also should be noted that ICTs may have no impact at all or, even on the contrary, they may have a negative impact. This happens because ICTs are not a major factor in the process of education refinement. The influence on the teachers and students work depends on how they are applied to the content of curricula, guidelines and assessment methods. The use of ICT in the educational process brings teachers a number of serious tasks:

- mastering of new information technologies of teaching;
- studying the influence of the ways of giving information to the process of learning of educational material;
- development of game elements of the learning process;
- the use of active teaching methods;
- mastering the methods of graphic representation of information and combining them with printed materials;
- development of methodological recommendations, tests, written tasks, module papers, consultations, etc.

The main task of studying a foreign language is the development of all kinds of foreign language activities and thinking, starting from oral communication and topping it of with the development of abilities to diverse work with text for getting necessary information. The use of Internet technologies in the study of foreign languages offers a unique opportunity to organize the learning process in a natural linguistic environment. Online learning is a powerful factor in increasing the motivation of learning not only one, but also several languages [12, p. 387].

Methods of implementing information technology training depend on many factors and are determined by specific learning conditions: the configuration and capabilities of available computer and telecommunication equipment, quantitative and qualitative composition of students' staff, accessible software, teacher qualification, etc.

The positive role of computer technologies is due to the fact that they are a powerful tool of labor, through which a person realizes the goals that enhance his intelligence, relieve of heavy routine operations that allow of setting and solving various creative tasks [4, p. 160].

The forms of computer work in foreign language classes may be different: learning new material or its consolidation with the help of computer educational programs, writing compositions, making translations, dictations, testing grammar or orthography of a foreign language, the use of training programs to learn the vocabulary or shell scripts to create computer tests to monitor the quality of student knowledge.

Let's look at some platform sites, computer training programs, mobile applications that can be used to learn foreign languages and to assess the quality of student knowledge.

Google Forms (https://www.google.com/intl/en_us/forms) is a part of Google Drive office tools. This is one of the fastest and easiest ways to create a survey or test: a teacher needs to write a task and choose the answer type (choose from several options, write your own one). The test can be sent to students by e-mail or on teacher's site using a special code. A teacher can add a Flubaroo plugin to speed up the work and it automatically checks student's answers and sets grades based on the specified criteria. These forms are free; only a Google Account is needed to use the resource.

With **Quizlet** (https://quizlet.com) a teacher can create tests where students can choose the right answers from the proposed ones, compare images and information, or write their own variations. Quizlet also works on Android and iOS. Quizlet is free, but there is also a Plus subscription for a certain price and it will allow the teacher to upload his own pictures and create an unlimited number of students' groups.

Proprofs (https://www.proprofs.com) provides tests of different types – a teacher can choose from one or more options, fill in the missing word or write a detailed answer. The service allows the teacher to insert text documents and presentations, PDF files as well as images, audio and video files into tasks. After completing the test, the teacher can leave it publicly available on the Proprofs site or insert it into his site.

Although the service is free, the Proprofs capabilities are expanded at a certain price. Teachers should pay attention to the Basic and Professional tariffs. The first one opens up all the basic features of the service and allows the teacher to create an unlimited number of tests for $ 20 a month; the second allows him to unite students into private groups and it will cost $ 40. New users can use Proprofs for free for 15 days after registration.

Kahoot! (https://kahoot.com) provides the opportunity to submit educational material in the form of surveys and tests. In order to establish feedback with students, a teacher can present new topics in the form of simple questions and answers, and consolidate knowledge through more detailed testing. Kahoot! is designed to use in the classroom – a teacher displays the material on the screen, and at that time students answer questions and discuss information using a special client for computers or a browser on smartphones (Android, iOS, Windows Phone). In order to enter the virtual classroom, students must have a special code that is sent by the teacher.

The service allows the teacher to find out how every student answered questions, or build a chart of the success of the entire group. Students themselves can follow their results in the special tables. Kahoot! is free and fully available after registration.

In **ClassMarker** (https://www.classmarker.com) a teacher checks students' knowledge with different response formats – in addition to the usual options, there is also an essay. To begin, the teacher needs to create a virtual class and send invitations to the students. ClassMarker keeps the results of all tests performed, leading statistics of progress. If the teacher has his own web page, he can insert test tasks on it.

In the free version ClassMarker allows a teacher to create no more than 100 tests. 400 tests per month costs $16.50 and 1000 tests costs already $33. The service has annual packages for those who rarely conduct online testing. The minimum number of tests (50 per year) costs $25 a year, and the maximum (5000 per year) costs $1,000.

Plickers (https://www.plickers.com) is a mobile application that helps teachers to question students directly in the classroom. Students are given special forms with answer variants (A, B, C and D) – after hearing the questions, they raise the required cards, which the teacher scans with the camera of his smartphone. Plickers allows the teacher to analyze the results of every student individually or to study the statistics throughout the group. The app works on Android and iOS and it's free to download.

Easy Test Maker helps to create tasks where students need to choose the correct and false statements. The texts can be formatted to use them in the tablet or downloaded in .pdf or .doc formats in order to test students in a more traditional format. The service is able to mix questions and answer options to make students harder to cheat.

The free version of Easy Test Maker allows a teacher to create 25 tests without the ability to export to "paper" formats. The Plus fee ($44.95 per year) includes checking English spelling, creating an unlimited number of tests and exporting to offline formats.

With Premium subscription ($74.95 per year), the service will automatically check the results, and it is possible to set a time limit for passing tasks and attach graphic files.

Lingualeo (http://lingualeo.com/ru#welcome) is one of the best English language learning apps. Students can work absolutely free with most exercises. A paid account is inexpensive and gives opportunity to do special grammar courses, as well as gives access to additional types of exercises. A free account allows students to learn new words, improve spelling skills, watch videos with subtitles, learn songs, and more. The authors have created the system that identifies the weak and strengths and develops a training programm, it remains only to follow the proposed recommendations. There is an Android and iOS version.

With this platform students can learn English only. On the other hand, there are more tasks and the level of English can be gained much higher. Lingualeo contains videos in English with tasks, texts with questions, lessons. At the very beginning of using the site, it offers a test to identify a level of English and according to this level the tasks will be selected.

The vocabulary for training is based not on topics, but on the words that have been translated incorrectly or marked in the text as unknown. There are several types of vocabulary in the form of a game. There is both a site and an application with Lingualeo. In addition, there is an extension to the browser that allows students to mark and translate words on sites they visit and these words will also be added to the training vocabulary.

Duolingo (https://www.duolingo.com). With this free application, one can learn not only English, but also German, French, Spanish, Italian and Portuguese. An internet connection is only required to download the next stage. The course is divided into degree on the principle of “from simple to complicated”. If the basics of the language are known, you can pass the initial stages ahead of time and go straight to the next level. Here all the skills are trained: writing, speaking, reading and listening.

The training takes place in the form of a game. First, a student studies a lesson with a certain vocabulary divided by topics: food, animals, nature. Then it is offered to pass the test: it is possible to make a mistake only three times, in the other case it is necessary to pass the lesson again.

The tasks in the tests are diverse: to listen to the speech and record what a student has heard, fill in the sentence with one option of four in the content, to pronounce the proposed unit (the program will assess the correct pronunciation). The most convenient thing is that the words are not separated from the language, but they are given in the context of the typical clichés. There are also grammar lessons. With this site one can prepare himself for level B2. There are programms for smartphones and tablets that complement the program on the computer.

Coursera (https://www.coursera.org) is an educational project that is a huge collection of courses and lectures, prepared by various leading universities (mostly American ones – University of Michigan, Stanford University and others). This site is aimed at those who already have a good command of English. One can "attend" lectures on computer science, design, literature (in general, in the specialty) not only in English but also, practically, in any language.

A training program is prepared for each course, and to complete it, one must necessarily complete the tasks of the course. If the course is paid, the certificate will be issued on the basis of the results. One can take the course free of charge, but then the certificate is not sent.

The main principles of the platform:

- distance learning plays an important role in lifelong learning;
- gradual mastering of the subject helps students to understand fully the material before moving on to a more complex study;
- many courses include tasks that have no automatic assessment by the computer. Therefore, students are given the opportunity to evaluate and review the work of classmates.

Vusuu (https://www.busuu.com) is a language course built like on Duolingo: vocabulary grouped by topics, learning new words in the form of a test, a new topic. In addition, there are also written exercises that are checked by native speakers. If a subscription to a site is made (it costs from 5 to 11 euros per month, depending on the subscription conditions), then more opportunities will be opened: grammar exercises will be added, a student can learn all languages available on the site, and not only the first one selected. The certificate can be given about passing the course approved by McGraw-Hill Education.

Rosetta Stone (http://www.rosettastone.eu) is a learning platform with 34 languages. A student chooses his native language and the one he wants to learn. Then he will be connected to a native speaker for an online conversation. In other words, the platform exists for the practice of spoken language. The site offers not only a talk with the native speaker, but also performs various unusual tasks. For example, the programm shows four photos to the student. Then he listens to the sound and text explanation that describes one of the photos. The student must select the photo that best describes the description. And this is completely in a foreign language, without tips.

According to the developers, their methodology is based on the simple truth: children learn the first language without rules, they learn the spoken language, and only then they analyze the rules at school. Why not learn additional languages in such a way? Consequently, the exercises are focused on concentration, listening and pronunciation (which is also assessed). As the student progresses, the complexity of the tasks increases. There is both an application and a programm on the computer. Unfortunately this is not free

but if the course is purchased once, then there will be no additional payment. The cost varies from 199 to 399 euros.

LingQ (https://www.lingq.com) is a kind of the library with hundreds of video and audio lessons in English. There is a free and paid version as well as a mobile app for Android and iOS.

The use of online technologies in professionally oriented learning of foreign languages contributes to the effective formation and development of skills and abilities in reading, writing and speaking; enlarging of vocabulary; the formation of a stable motivation for the study of a foreign language, the individualization of learning and activation of cognitive activity of students; increases the intensity of the educational process; provides comprehensive control of educational activities of students (current, final), which can significantly save time and respect the objectivity of assessment [3, p. 306].

Today in contemporary pedagogical science there is a significant interest in language education in non-language educational institutions. A professional approach to teaching foreign languages is based on the establishment of integrated links between the content of professionally oriented learning with the general foreign language course, which is reflected in curricula, textbooks, manuals. A foreign language influences the content and formation of the conceptual foundations of many special disciplines, since the idea is always reflected in the language. With the help of a foreign language, clarification of terminological and conceptual differentiations and the content of professionally relevant disciplines is determined, which promotes the development of professional intelligence, skills of communication in the professional area.

Currently, information technology in the educational process is used at all its stages: during the planning, organization, implementation, control of the results and management of knowledge quality.

Understanding of teachers that ICT fundamentally changes the process of training specialists, provides a new kind of education, and therefore the implementation of ICT in the process of training specialists is mandatory for the modern educational process in higher educational institutions. As Y. Mashbits noted, “teachers will be able to use the new information technology effectively only when they have a desire and will be able to apply these technologies in practice” [5, p. 3].

Learning foreign languages today is changing significantly due to the information systems that are being introduced into the learning process. First of all, it should be noted the contribution of information technology in creating a foreign language environment – one of the main motivating and stimulating factors in the process of learning foreign languages, which previously held exclusively on the mastery of a teacher. The new trends include the transfer of powers to design and manage the learning process not only to the teacher, but also to the student himself.

The positive role of information technology is due to the fact that they act as powerful tools, through which a person realizes the tasks that increase his intelligence, free from heavy routine. Successful use of information technologies facilitates the development of an adequate specialization of cognitive processes with a student – perception, thinking, memory, the formation of motivation specialized on the discipline content, increases the self-esteem of a person, forms positive personal qualities. In the interaction with intelligent computer information systems, the individual's ability to self-regulation, self-organization as well as cooperation and co-creation increases.

It should be noted that even the availability of the most modern computer itself does not guarantee the knowledge of a foreign language, without taking into account the need for the organization of this activity scientifically, either directly by a teacher, or indirectly – by a system of means incorporated in the software together with linguistic material. Information technology is not just an intermediate link between a student and a teacher. Changing means and methods of teaching leads to a change in the content of educational activities which is becoming more independent and creative, contributes to the implementation of an individual approach to learning.

Conclusions.

To summarize, it should be noted that the foreign language for specific purposes can be both a general educational and a professional subject. Information aspect and communicative and cognitive value of linguistic material extend the boundaries of cognitive interest of student youth. Involving in a situation of professional communication, they do not only master the knowledge of the subject “foreign language”, but also learn the experience of production activity which is constantly transforming. When students understand that the foreign language contributes to their better knowledge of the chosen profession, then studying this discipline acquires a personal meaning and becomes the basis for the formation of professional qualities. The use of ICT helps the teacher to implement a student-oriented training, allows to provide an individual and differential approach, taking into account the peculiarities of the students, their level of knowledge.

In teaching a foreign language, ICT contributes to the modeling of the conditions for communicative activities, the acquisition of lexical and grammatical skills, the increase of speech exercises, the intensification of the process of self-assessment of students’ knowledge, and the ability to transfer linguistic material to the other types of speaking activity. Thus, the information and communication technologies allow the implementation of advanced pedagogical ideas, approaches, concepts oriented on the formation of a creative person in the future specialist, his readiness and ability to improve his professional activities. However, the efficiency and effectiveness of ICT usage lies in the harmonious combination of these technologies with traditional teaching methods. They should be complementary, taking into account the advantages and disadvantages of each form of the educational activity.

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INVESTMENT OF HIGHER EDUCATION AS AN ELEMENT OF REALIZATION OF STRATEGY OF DEVELOPMENT OF ECONOMY OF SUMY REGION

Abstract. *The real economic situation and the condition of attraction of investments in higher education of Sumy region considerably complicate the investment activity. The volume of investments does not ensure preconditions of economic growth and even full-fledged reproduction of their available condition. The investment attractiveness is considerably influenced not only by the general condition of economy of the country, but also conditions of transaction, especially the degree of interference of the state and the level of corruption. The article analyzes the current state of investment activity in Sumy region, not only in cities and districts, by kinds of economic activity, but also from the EU and other countries of the world. The situation which appeared in the investment market in the region was investigated. The investment as a part of realization of strategy of economic development of Sumy region was determined.*

Introduction.

In the process of economic reproduction over the period of independence of Ukraine, direct foreign investments performed a number of important social functions, promoting a certain transformation of sectoral structure of Ukrainian economy and relations of property. These processes are reflected in differentiation of direct foreign investments by sectors of national economy and countries-donors of investments. Foreign investments in Ukraine are, on one hand, a determinative precondition of development of national economy; on the other hand, they are an important indicator of entrepreneurial activity [16].

The investment of higher education in Sumy region needs a constant profound research. It concerns especially questions of foundation of investment strategy, choice of efficient forms and directions of investment, as well as search of new ways of activization of investment activity in conditions of development of competitive economy.

The structural and qualitative renewal of production and creation of market infrastructure take place almost completely with the help of and at the expense of investment. The more large-scale volumes and higher efficiency of investments, the faster the reproducible process takes place, positive market transformations are realized. On the other hand, an insufficient investment leads to the loss of competitiveness of national economy, decline of basic capital, decrease of production and increase of production price, which in its turn, stipulates the worsening of the problem of investment resources, hence the reduction of investment activity [12].

1. Analysis of the latest publications.

The modern development of Ukrainian economy is inseparably connected with investment processes which are motive power of integration of the economy into the world economy at the expense of renewal of basic assets, transfer of capitals from one sphere in others, transfer of technologies, innovations and administrative experience [20].

The problems of investment are quite urgent today, and their solution requires a considerable research, that's why many scientists paid attention to the study of this question, among whom one can mention: T. Mayorova, A. Peresada, I. Blank, V. Fedorenko, A. Galchynskyy and many others. In Ukraine, methodological issues of investing in higher education institutions have been given attention in the works of V. Bazylevych, O. Grishnova, I. Gryshchenko, M. Kushnir, T. Swans, O. Molina, O. Romanovsky, L. Shevchenko and many others.

In spite of the major contribution of the scientists to the research of the investment process, there are still questions which require a subsequent improvement and a comprehensive research, and the problem of investment of higher education as the element of realization of strategic development of the economy of Sumy region remains especially urgent [19].

When analyzing opinions of different scientists, we can point out that the investment process in the state with market economy has to take into account such principles: objective necessity of acceptance of long-term and medium-term cycles of investment activity; interaction of local, branch-wise, regional and national cycles of investment activity; formation of market key factors in investment sphere at the same time with analogous processes in other branches of the national economy; logicality and integrity of investment cycle; succession in realization of concrete measures, priority of direction of means for realization of investment process [10].

The purpose of research is the interpretation of the modern condition of investment of higher education, analysis of problems and outlooks of realization of investment activity in the region, the determination of priority outlooks of investment as the element of realization of strategy of development of the economy of Sumy region.

2. Principal results of researches.

The formation of investment activity in Ukraine is an extremely important component of strategic development of the economy not only of the country in whole, but regions particularly. Thus, the priority task is attraction of investment resources in higher education, which will give the possibility to the country to develop and will ensure the realization of extremely important tasks which are very necessary during the formation of competitive advantages among other countries.

With the purpose of formation of competitive production, one needs to mobilize investment resources and realization of strategically important and priority tasks for promotion of subsequent development of economy and higher education.

In modern conditions, Sumy region has an objective necessity of activization of investment in higher education.

In the period of economic crisis, just investments promote the solution of urgent problems, stabilization of economy, activization of processes and growth of its activity, which correspondingly raises the general level of attractiveness of economy for investors, as well as determines potential possibilities of subsequent development of national economy. The condition of investment activity in the country can be estimated when analyzing principal economic indices: total volume of investments, the part of investments in gross domestic product, the part of real investments in total volume of investments, total volume of real investments, the part of real investments directed to basic capital, and others [6].

In normative acts, particularly, in Laws of Ukraine «About investment activity» [2] it is determined that investments are all kinds of property and intellectual values that are invested into objects of entrepreneurial activity and other kinds of activity, as a result, a profit is created or a social effect is achieved and «About taxation of profit of enterprises» [3] it is determined that an investment is a economic operation which stipulates acquisition of basic assets, fictitious assets, corporative rights and securities in exchange for means or property (investments are divided into capital, financial and reinvestments). However, it is worth pointing out that different interpretation is put in the definition «investment» in these Laws.

The adoption of the new Law of Ukraine "On Higher Education" was an important step in reforming higher education and its financial support. The law establishes the legal, organizational, and financial principles for the functioning of the higher education system in Ukraine [1].

When analyzing opinions of different scientists, we will point out that investment process in a state with market economy has to proceed from the observance such principles: objective necessity of acceptance of long-term and medium-term cycles of investment activity; interaction of local, sectoral, regional and economic cycles of investment activity; formation of market levers in investment sphere simultaneously with analogous processes in other sectors of national economy, logicality and integrity of investment cycle; succession in realization of concrete measures, priority of direction of means for realization of investment process [13].

The most widespread forms of investments are: investments into basic capital and direct foreign investments. The realization of financing of investments into basic capital may take place at the expense of different sources, among which one can single out financing of investments at the expense of state budget, at the expense of
local budgets and others [20].

In January-June 2018, enterprises and organizations of Sumy region at the expense of all sources of financing drew 2623,8 mln. UAH of capital investments which is by 14,2% more than the volume of capital investments during the corresponding period of the previous year. In comparison with January-September 2016, enterprises and organizations of the region at the expense of all sources of financing drew 3382,6 mln. UAH of capital investments (that is in 2018 by 758,9 thousand UAH less (in comparison with 2016), which was 3030,6 UAH calculating on one person.

The main source of financing of capital investments remain own means of enterprises and organizations, at the expense of which 77,1% of total volume (table 1) has been drawn.

Table 1

Capital investments by sources of financing and kinds of economic activity

	Drawn (utilized) capital investments in January-September 2016		Drawn (utilized) capital investments in January-June 2018	
	thousand UAH	in % to total volume	thousand UAH	in % to total volume
Education	**11641**	**0,6**	**21958**	**0,8**
In all	**3382624**	**100,0**	**2623770**	**100,0**
including at the expense of				
means of state budget	26761	0,8	29628	1,1
means of local budgets	201411	6,0	209642	8,0
own means of enterprises and organizations	2427008	71,7	2021859	77,1
bank credits and other loans	327946	9,7	165517	6,3
means of foreign investors	–	–	–	–
means of population for building of housing	392796	11,6	178426	6,8
other sources of financing	6702	0,2	18698	0,7

** according to the data [10,18].*

Almost all capital investments in January-September 2016 (98,9% of total volume) were drawn into tangible assets. The unit weight of capital investments into buildings and constructions is 29,7% of total volume and 65,2% on purchase, modernization and improvement of machines, equipment, inventory and transport facilities, 1,1% of total volume of capital investments is directed into fictitious assets.

In January-September 2016, the biggest part (39,3%) of all capital investments in the region was drawn by enterprises of agriculture, forestry and fish industry. The considerable volume of investments was invested by industrial (32,0%) and building (9,6%) enterprises and on education 0,6%.

In January-June 2018, considerable of capital investments were drawn в machines, equipment and inventory and transport facilities – 71,2% of all investments, into buildings and constructions – 23,4% and on education 0,8%. 119,7 mln. UAH of capital investments (4,6% of total volume) are directed to capital repair of assets (table 2).

Table 2

Capital investments by kinds of assets

	Drawn (utilized) capital investments in January-September 2016		Drawn (utilized) capital investments in January-June 2018	
	thousand UAH	in % to total volume	thousand UAH	in % to total volume
In all	**3382624**	**100,0**	**2623770**	**100,0**
investments into tangible assets	3346693	98,9	2593021	98,8
housing buildings	422774	12,5	198646	7,6
non-residential buildings	381239	11,3	267608	10,2
engineering installations	198884	5,9	147170	5,6
machines, equipment and inventory	1772555	52,4	1489834	56,8
transport facilities	433492	12,8	379120	14,4
land	...[1]	...[1]	1213	0,0
long-term biological assets of plant growing and animal breeding	...[1]	...[1]	60152	2,3
other tangible assets	67627	2,0	49278	1,9
nvestments into fictitious assets	35931	1,1	30749	1,2
from them				
software and databases	15871	0,5	8378	0,3
rights to commercial designations, objects of industrial property, author's rights and allied rights, patents, licenses, concessions and so on	4562	0,1	8282	0,3

[1] *The data are not published for the purpose of ensuring of realization of requirements of the Law of Ukraine «About state statistics» concerning confidentiality of statistical information.*

** composed by the data [10,18].*

In Ukraine, attraction of own means of the enterprise for ensuring of achievement of the primary intent of investment activity became very widespread, that is: creation, expansion, as well as reconstruction and modernization of production facilities. One more extremely developed kind of investment activity in Ukraine is attraction of direct foreign investments. This kind of investments may be presented as attraction and crediting of resources of international investment institutions, foreign corporations and firms, joint ventures, which is realized without financial brokers in production assets for the purpose of getting income and participation in production control [15].

The volume from beginning of investment of direct foreign investments (share capital) into the economy of the region by 1st October 2016 was 195775,6 thousand USD and calculating on one person of population was 175,4 USD, and the volume of direct investments (share capital) from Sumy region into the economy of countries of the world by 01.07.2018 was 3153,4 thousand USD [10].

Investments came from 30 countries of the world. The countries of EU from beginning of investment invested 173,9 mln. USD (87,1% of total volume of share capital), other countries – 25,7 mln. USD (12,9%).

Investments came from 30 countries of the world. The countries of EU invested 170975,4 thousand dollars (87,3% of total volume of share capital) from the start of investment, other countries of the world – 24800,2 thousand dollars (12,7%).

The leaders of investment of enterprises of the region are partners from Cyprus (85891,1 thousand USD), Great Britain (35590,4 thousand USD) and Netherlands (33818,4 thousand USD). These countries have almost 80,0% of regional volume of direct investments [8].

From January till September 2016 foreign investors invested 7043,9 thousand USD into the economy of the region and immobilized 1855,2 thousand USD of direct investments (share capital). The decrease of value of capital at the expense of difference of exchange is 8478,9 thousand USD (table 3) [18].

Table 3

Direct foreign investments (share capital) from countries of the world into the region by kinds of economic activity (thousands of USD)[1]

	Volume of investments by	
	01.10.2016	**01.07.2018**
Cyprus	**85891,1**	**86487,4**
including		
industry	54272,1	55146,7
from it		
processing industry	53267,6	54152,8
Operations with real estate	31300,6	31122,7
Great Britain	**35590,4**	**36999,8**
including		
wholesale and retail trade repair of vehicles and motocycles	27451,8	29383,2
Netherlands	**33818,4**	**33973,7**
including		
agriculture, forestry and fish industry	771,5	1015,3

1 The list of countries is determined having regard to the biggest volumes of investments invested into the economy of Sumy region.

** composed by the data [10,18].*

Thus the biggest foreign investments came in 2016 - 57,1 % and 19,2% of all attracted direct foreign investments (in towns and districts) to Sumy and Shostka, and in 2018 - 55,0% and 2,6% of all attracted direct foreign investments (in towns and districts) to Sumy (table 4) [18].

Table 4

Direct foreign investments (share capital) in towns and districts

Towns and districts	Volume of investments by			
	01.01.2016		01.07.2018	
	thousands of USD	in % of sum total	thousands of USD	in % of sum total
Sumy region	**199065,8**	**100,0**	**188640,2**	**100,0**
town of Sumy	113759,1	57,1	103813,7	55,0
town of Glukhiv	6167,3	3,1	4984,2	2,6
town of Konotop	2540,5	1,3	2444,9	1,3
town of Lebedyn	458,7	0,2	445,9	0,2
town of Romny	404,2	0,2	…2	…2
town of Shostka	38279,9	19,2	434,8	0,2
districts				
Bilopillya	152,7	0,1	161,2	0,1
Glukhiv	7134,7	3,6	…2	…2
Krolevets	843,0	0,4	745,1	0,4
Lebedyn	423,5	0,2	…2	…2
Lypova Dolyna	8,5	0,0	8,7	0,0
Okhtyrka	1181,4	0,6	…2	…2
Romny	357,9	0,2	347,2	0,2
Seredyno-Buda	1,8	0,0	1,7	0,0
Sumy	303,9	0,2	1936,2	1,0

2 The data is not published for the purpose of guaranteeing of realization of requirements of the Law of Ukraine «About state statistics» concerning confidentiality of statistical information.

** composed by the data [10,18].*

Considerable volumes of direct foreign investments are concentrated in industrial enterprises – 83678,6 thousand USD (42,7% of total volume).

Organizations that carry out operations with estate property accumulated 42427,8 thousand USD (21,7 % of total volume of direct investments into the economy of the region), in enterprises of wholesale and retail trade; repair of vehicles and motorcycles – 41266,8 thousand USD (21,1%).

The arrears of enterprises of the region of credits and loans, trade credits and other commitments (debt instruments) before direct foreign investors by 1st October 2016 was 25145,9 thousand USD. Such direction of direct foreign investments and capital investments in regional section does not promote the even social and economic development of regions and intensifies further increase of difference in their development.

In Ukraine, there is a steady tendency to build-up of volumes of attracted investments, which is usually the indicator of positive economic and social changes in the national system of management. Only the growth of economic indices, as well as the level of social maintenance of a country may be a basis helping the national market of investment activity to develop. The achievement of the above-mentioned goals is impossible without detection of strategically important directions of development of national economic complex which correspond to concrete tasks. Thus, only the strategic development of national economy may ensure structural transformations which are so necessary during building and development of efficient market relations [4].

The analysis of geographical structure of investment flows indicates that countries of CIS are notable for a low investment activity in Sumy region, almost all investment means belong to other countries of the world. Principal countries-investors: Cyprus - 253,3 mln. USD; Netherlands - 46,7 mln. USD; Great Britain - 6,2 mln. USD; Virgin British Islands - 4,3 mln. USD; France - 3,4 mln. USD. Territorial section of direct foreign investments: Sumy - 72,5%; Shostka - 9,5% [19]. The city budget expenditures for the branch "Education" for 9 months of 2017 amounted to 497,2 mln. UAH.

From the city budget for the organization of health improvement and recreation of children in the summer of 2017 was allocated 6,3 mln. UAH, which is 3,6 mln. UAH more than last year. The maintenance of 7 vocational schools in the city of Sumy, which since January 1, 2016 were transferred to financing from the city budget (expenditures amounted to 59,2 mln. UAH). The improvement of the material and technical base of educational institutions is directed to the budget of the development of the city budget in the amount of 16,4 mln. UAH, of which for the purchase of equipment – 3,2 mln. UAH (furniture equipment for schools, children's furniture for children's homes, computers, etc.),
overhauls of buildings – 13,2 mln. UAH.

To purchase items and materials, maintenance of equipment, maintenance of vehicles, payment of communications services, software, purchase class magazines, diplomas and certificates to ensure the current needs of agencies and institutions recharge fire extinguishers, verification of meters for hot and cold water washing the heating system used more than 17 mln. UAH. Besides the expense of the city budget for capital investments were made of a total of 12,8 mln. UAH, including the reconstruction of school buildings № 22, 29 and kindergarten number 2, 22 utilities Peschansky school, kindergarten pool number 14 , sports grounds on the territory of schools number 6, 9, 22, gymnasium № 1 and the school № 22, renovation of the school stadium in the school № 5 [14].

The volume of direct investments (share capital) from the region into the economy of countries of the world by 1st October 2016 and 2018 was 2258,7 thousand USD and 2105,5 thousand USD. Demands of direct investors by debt instruments to enterprises of direct investment abroad in 2016 were 268 thousand USD and in 2018 - 290,1 thousand USD. Direct investments of non-residents in the region (share capital and debt instruments) into the economy of countries of the world in 2016 was 2209,2 thousand USD and in 2018 - 2212,8 thousand USD (table 5) [10,18].

Table 5

Direct foreign investments into the region (thousand US dollars)

Investments	In all	Including from		In all	Including from	
		countries of EU	other countries of the world		countries of EU	other countries of the world
	by 01.10.2016			by 01.07.2018		
Direct investments of non-residents in the region (share capital and debt instruments)	225872,2	183012,1	42860,1	210553,7	184924,5	25629,2
Came share capital of non-residents	7043,9	6043,1	1000,8	255,0	…2	…2
Left share capital of non-residents	–1855,2	–925,4	–929,8	–39,4	…2	…2
Other changes of value of share capital of non-residents (change of value, loss, reclassification of investments etc.)	–8478,9	–6070,2	–2408,7	6886,8	5867,5	1019,3
from them: difference of exchange	–8478,9	–6886,0	–1592,9	6886,8	5867,5	1019,3
Share capital of non-residents	195775,6	170975,4	24800,2	188640,2	173309,1	15331,1
Direct investments of non-residents in the region (share capital and debt instruments)	220921,5	181626,2	39295,3	221288,6	194658,2	26630,4

2 The data was withdrawn for the purpose of ensuring of realization of requirements of the Law of Ukraine «About state statistics» concerning confidentiality of statistic information.

** composed by the data [10,18].*

When analyzing the dynamics of direct foreign investments into national economy, it should be emphasized that the process of foreign investment is unsystematic and chaotic. But such problem definition is not correct; it does not take into account important aspects of business motivation of investors, the condition of
Ukrainian economy and its place in the process of international division of work [16].

One should take notice that the considerable part of direct foreign investments into Ukrainian economy during the whole period of independence was directed to purchase of already existing enterprises, their expansion, reconstruction and modernization. First of all, it concerns industrial enterprises. However, the fitting out of industrial production with new machinery and technologies, especially obtained as a result of carrying out of own fundamental and applied scientific researches, require mobilization of a considerable investment resource [5].

The investment strategy plays a key role in context of structural building of strategy of development of national economy. In the modern economic literature, the notion of investment strategy is determined as a formation of a system of long-term goals of investment activity and the choice of the most efficient ways of achievement [15].

Investment strategy is a complex system of long-term purposes of investment activity which are determined, on the assumption of general tasks of development of the managing subject, as well as the selection of the most efficient ways of their realization. It should be pointed out that the investment strategy should certainly take into account the mission and purposes of the subject of management, external and internal factors of influence and be based on strategic priorities of a concrete national economic system.

When determining strategic priorities, it is necessary to take into account available competitive advantages on the world market which are expressed in the first place in availability of products of high tecnologies. At the present time, aviation, metallurgy, energetics, machine building, machine-tool construction, biotechnology and a number of other industries can be referred to branches where serious technological achievements exist and potential advantages remain intact [17].

Thus, the realization of strategy of development of national economy is directly connected with the growth of volume and quality of investment, creation of favourable conditions for attraction of investment resources. When summing up the entire aforesaid, one can draw conclusions that investment processes in Sumy region develop quite actively. The most developed forms of investment for the economy of the region are the attraction of investments into basic capital and direct foreign investment [21].

The most important chance for Sumy region in the nearest period is efficient attraction of considerable investment resource into the economy of the region through the creation of favourable investment climate.

The creation of favourable investment climate in the region is the chance which will strengthen factors:

1. Stable development and relatively high productivity of agricultural sector;
2. Presence of free ground areas for business and investment;
3. Presence of natural resources (minerals (oil, gas), land, water, forest resources);
4. Presence of raw material base for further processing of agricultural production.
5. Introduce multi-channel financing of education through the development of incentive mechanisms, the creation of legislative and regulatory frameworks in terms of motivation for private investment in the field of education and science.

It is necessary to say in the first place that investment climate in the region can be characterized as favourable. Sumy region has quite developed potential and by level of anthropogenic load of territory takes a place in the first ten of regions of Ukraine. The innovative activity has become more active. A number of progressive technological processes has been introduced in the industry. The stable financial and credit system promotes the formation of favourable investment climate.

Investment attractiveness of regions is the integrated characteristics of individual regions of the country from the positions of investment climate, level of development of productive forces, investment infrastructure, possibilities of attraction of investment resources and other factors which influence essentially the formation of profitability of investments and investment risks.

At the modern stage of development of national economy, traditional sectors of economy remain the most attractive for investors. First of all, these are metallurgy, machine building, chemical industry, food industry. At the same time, such sectors as automobile industry, consumer electronics, high tecnologies, wind energy, production of biofuel, logistics, higher education and others attract more often attention of investors.

According to the Europe 2020 Strategy, by 2020, no less than 40% of the population aged 30 to 34 should have higher education. Such tasks are set in the light of the fact that education plays a key role in raising the level of competitiveness of the economy. Ukraine is a state with a high demand for higher education. Expenditures on education in the structure of GDP are also quite significant, which is an average of 5,3-7% of GDP, which corresponds to the level of countries with very high levels of human development. But if the total investment in education to GDP, including the higher, Ukraine is almost in some parameters with the developed countries, then the structure of investment - is sharply different. In particular, if in foreign countries the share of investment resources of business structures and employers, which is aimed at preparing the required specialists for their industries is 10-30%, then in Ukraine - within 1-2%. As a consequence, in the sphere of higher education of Ukraine, the main funds of households and the state are directed. The situation has arisen when employers do not actively participate in the training of specialists, which negatively affects the labor market and the ability to find the first guaranteed job for graduate professionals [9].

The flows of direct foreign investments were directed mainly not into production of goods, but into spheres of Ukrainian economy which ensured circulation, transportation and distribution of goods and services. Such sectoral distribution of direct foreign investments became the consequence of corresponding business strategies and tactics of foreign investors. And just this structure of foreign share capital will serve as the basis which will determine volumes and structure of the flow of direct foreign investments into the Ukrainian economy. It is quite obvious that foreign investors are very careful about their business activity in Ukraine. At the same time, Ukraine potentially may be one of leading countries by attraction of investments. The country is rich in natural resources, qualified labor force, has considerable scientific and technical potential, available infrastructure, powerful production basis, immense domestic outlet of production and successful integration into world financial and commodity market. However, Ukraine has quite negative investment image conditioned by political factors, that's why it is unnoticeable that the state in the last years made appreciable steps in the direction of integration into the world economy [16].

Conclusions.

Principal directions of development of investment activity in the region concerning search and attraction of investments are concentrated in the Project of Strategy of regional development of Sumy region for the period till 2020 [19].

Their realization indicates that investment climate has a constant tendency to improvement. As for further attraction of investments, one should mention the following thing. The active work is carried out in the region concerning spreading of information about the investment potential of the region. Sumy region presents constantly investment projects and proposals of enterprises of the region as at national investment forums as at international measures concerning these problems. If to analyze today's situation and compare з potential possibilities of Sumy region, one can draw the following conclusions:

The receipt of direct foreign investments does not correspond to needs of economic development of the region.

The investment infrastructure is not sufficient and performs its functions not in full. It concerns especially almost absent stock market, which does not enable to develop portfolio investments.

The probability of attraction of above-mentioned external capital is 70% having regard to the necessity during two next years to raise financial rating of Ukraine by international agencies, improve the judicial system (arbitral practice),
take measures concerning creation of favourable investment climate in the region and remove problems which are provided below.

Basic problems which must be removed in order to form the attractive image of the region [19]: 1) The lack of investment portfolio, which corresponds to international criteria. 2) Insufficient awareness of the public about priorities in the development of economy of the region and forms of state support. 3) Developed uncivilized monopolism on

property, services and resources, which does not create competitive environment and security of business. 4) Non-transparency of tenders and privatization of processes in the region. 5) Insignificant number of managers able to work with foreign investors.

The main direction of reforming investment activity in education should be further democratization of investment management: empowerment of regions and educational institutions in terms of investment, transparency, efficiency and control over the use of funds, improvement of their structure, solution of personnel issues, organization of production and commercial activities, international cooperation, etc. But it should be combined with the only state requirements, educational standards to encourage domestic and foreign investors to participate in the development of education in the region.

The scope of state regulation of investment in education in Ukraine is still imperfect and requires qualitative restructuring based on the use of modern tools, methods and concepts of investment management. Much of the education system's problems are caused by economic and political crises, the inability of the authorities to make effective decisions in a timely manner, respond to changes in society, to adapt the education system to new challenges of our time [9]. In work with an outside investor, the motivation of the investor must be taken into account, which allows establishing a dialog of mutual understanding and, in this way, finding correct approaches to the process of investment in higher education. Taking into account the whole specific character and complexity of decision-making by a foreign investor about capital investments abroad, especially into such risky markets , as Ukrainian market, a natural need appears in purposeful work with these investors, formation of positive image of the region.

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EFFICIENCY OF THE USE OF INNOVATIVE TECHNOLOGIES OF TRAINING IN STUDYING ECONOMIC THEORY

Abstract. *The article deals with the main methods of teaching in higher education establishments, which are used in the study of economic theory. It is proved that the effectiveness of traditional teaching methods in the context of globalization and informatization is lower than that of non-traditional ones – active and interactive. The main advantages and disadvantages of different ways of informing students are considered. In modern conditions it is important not only to saturate the student with information, but to accustom him to an independent search for solving problems. The article analyzes the various options for conducting lectures from the standpoint of assessing the maximum involvement of students in creative discussions. The main principles of conducting classes using interactive teaching methods are also considered. The basic problems are specified that arise in the course of studying of economic disciplines. Psychological and pedagogical methods of activation of informative activity of students are defined at studying of economic disciplines. The importance of modern teaching methods' usage in the teaching of economic theory is proved.*

Introduction.

Due to the profound social and economic transformations in society, in the conditions of globalization and informatization of the economy, the value-orientational weight of socio-economic knowledge increases, and the importance of having a young person of economic thinking increases.

The main task of teaching economic theory is the disclosure of the content of economic concepts, categories, laws, the development of interest in the economy and the need for constant updating of knowledge, the formation of economic thinking and economic consciousness' skills. In the practice of teaching economic theory, it is important not only to reveal the content of economic categories and concepts, but also to find effective forms of knowledge, to achieve their assimilation at the level of thinking and human behavior. The priority in training is not so much the maximum absorption of scientific information, but the formation of skills to think creatively and independently receive new knowledge, and this task becomes the most important in higher education [1, c.6].

Due to the traditional teaching methods' impossibility (designed to provide relatively constant training information) to ensure, in modern conditions, the proper creative development of students' abilities, the need for stimulating students for active learning, self-seeking solutions to problems, creative and flexible thinking is increasing [2]. The data of psychologists' research show that 10% of the heard, 50% of the observed and heard, are captured in the person's memory. Made by the same person remains in memory by 90% [3]. In higher education of Ukraine, along with traditional teaching methods such as lectures, seminars, independent work of students, non-traditional methods are being used more and more widely, the essence of which is to organize the educational process in the form of dialogue. This will help students to learn how to express their thoughts, analyze problematic situations and find effective ways to solve them. When teaching economic disciplines, it is very important to use active teaching methods – role, managerial and educational games, social psychological trainings – which provide the maximum activity of teachers and students [4].

The issues of activating the cognitive activity of students are devoted to the work of such authors: I. Balyagina, I. Boricova, J. Bruner, P. Gudz, G. Kovalchuk, O. Pometun, O. Zhornik, and others. Essential characteristics of teaching in higher educational institutions were considered by O. Aksonova, W. Becker, K. Garber, S. Gritsulenko, V. Kulishov, T. Mahina, N. Potapova-Sin'ko, A. Romaniuk, I. Ternova and others

However, it should be noted that many problems of introducing new technologies in the teaching methodology of economic disciplines require further research. Unresolved issues concerning effective usage of interactive technologies in the teaching of economic theory are still remaining.

The purpose of this research is the theoretical substantiation of innovative teaching methods in the teaching of economic theory, the study of the essence of active teaching methods that can be used for the training of future economists.

1. Interactive methods and motivation for teaching in higher education

The purpose of training is successfully and rationally achieved if different teaching methods are used, that is, the ways of the joint activity of the teacher and the student aimed at achieving educational goals. Component of the method - reception - short-term interaction between the teacher and students, aimed at the transfer and mastering of specific knowledge and skills [5].

To master techniques means to find a way for method's implementation, a sequence of learning actions, which are fixed in skills and habits. In general, the techniques are divided into: logical (problem statement, identification of signs, comparison, conclusions, generalizations), organizational (plan entry, plan response, board response, demonstration, plan observation, distribution of work on operations), technical (question on a blackboard, questionnaires, attaching drawings to a board, using tables).

In the practice of teaching, there are approaches to the definition of teaching methods, based on the degree of awareness of the perception of learning material: passive, active, interactive, heuristic, and others.

The relationship between the teacher and the audience in passive teaching methods is carried out through surveys, independent and control work, testing, etc. From the point of view of modern pedagogical technologies and the efficiency of students' learning material, the passive method is considered to be the most ineffective, but it certainly has a number of advantages: a relatively easy preparation for a teacher's occupation and the ability to convey a significant amount of study material within a limited time frame of the class. For these reasons, many instructors prefer the passive method than others.

The active method is a form of interaction between students and the teacher, in which they interact with each other during the class, and students are active participants in the class. Here the teacher and students are on an equal basis, and the authoritarian style of interaction is changing to a democratic one.

In contrast to active methods, interactive – oriented to the broad interaction of students not only with the teacher, but also with each other [6].

Interactivity in learning can be explained as interaction of students, stay in the mode of conversation, dialogue, joint action. The words of the Chinese philosopher Confucius, known more than 2400 years ago, are: «What I hear is forgetting. What I see, I remember. What I do, I understand. « These three simple statements substantiate the need for active education. Having somewhat changed the words of Confucius, one can formulate the credo of interactive learning: «What I hear, I forget. What I see and hear, I remember a little. What I hear, see and discuss, I start to understand. When I hear, see, discuss and do, I acquire knowledge and skills. When I transfer knowledge to others, I become a master» [7].

Explanations and demonstrations, by themselves, will never give real, sustainable knowledge. This can only be achieved through active (interactive) learning.

Interactive learning technologies are most consistent with a person-oriented approach in the educational process. The basis of interactive learning are the principles:

- the direct participation of each participant in classes, obliges the teacher to make each participant an active seeker of the ways and means of solving one or another problem;
- mutual information and spiritual enrichment: the educational process must be organized in such a way that its participants can exchange life experiences and information received;
- personal-oriented learning.

The use of interactive methods helps ensure the depth of the studied content [3, pp.34-36].

Based on the analysis of literary sources [4,8,9], it is possible to highlight such leading interactive teaching methods as trainings, role and business games, video on demand, case study, active learning method, and academic discussions. An interesting study

is about the methods of teaching economic disciplines in higher education conducted by American scholars. They were held at intervals of five years. The purpose of the study was to establish a correspondence between the necessity and the actual use of various methods of teaching economics in higher education institutions. Dominating among all the named variants of teaching methods for economic disciplines, work in groups was named. The minimum number of positive responses to the effectiveness of training was the fulfillment of individual tasks [10]. Among all the interviews mentioned during the survey, the most striking form of study is discussion, rather than an enticing lecture course. Students prefer a form of discussion in which the instructor (instructor) routs the direction of the discussion, rather than the search for truth itself in the discussion process between the groups. One of the negative consequences of such a situation is the extremely low level of literature's usage in the teaching, including the reference. Despite the proven need to use innovative teaching methods, a significant number of students consider a sufficient teaching method that allows them to passively listen to the subject and on which they will be well prepared for the tests (as opposed to the practical application of the knowledge gained). Thus, some instructors can get quite high ratings without using advanced methods in learning. While the main goal is theoretical study of the material and the expectation of a positive assessment at the end of the semester, until then, such a situation will remain unchanged. However, there is another side of the various teaching methods' application. Teaching the subject allows you to apply such methods as game, interactive. In this case, we need to be able to maintain a balance and not focus on exaggerating the importance of our own development and instruction in order to avoid the possibility of transforming learning into entertainment [11].

In order to present the results of the work, students use a method such as a presentation. Presentations are used to present certain achievements, results of a group work, a report on the performance of an individual task, instruction. All presentations are conducted according to one structure of the script: the solemn part; press conference; casual communication. An important place in the system of tasks for activating students' independent work in the study of economic disciplines is the method of educational design. G. Kovalchuk believes that the method of projects contributes to the formation of the students' abilities to use various sources of information to solve the problem, to work together in the group, to present and argue their proposals for the fulfillment of tasks, to use knowledge on other subjects, to apply theoretical knowledge in practice. An important advantage of the method of projects, along with other active methods, is the ability to develop students' creative abilities [12].

Discussions play an important role in the preparation of future economists. Discussion as a way of transferring knowledge in the system of «teacher-student», «student-student» is part of a problem-based methods' group [13].

The method of training discussions is effective in the study of complex and bulk material. The group of students is divided into small subgroups (from 5 to 10 people) and is offered certain economic situations for consideration.

The authors have successfully tested this approach in studying such discussion topics on political economy as "Ownership", "Economic system of society", "Economic policy" as well as others. In the process of discussion there is an immediate feedback that gives participants the opportunity to see themselves as if from the outside, to test themselves in a new position, to change their behavior according to a new model that appears directly in the course of the discussion. Group interview – a kind of group discussion, aimed at studying the general opinion of the group members on a specific subject, event. Socratic conversation is a kind of discussion dialogue in which one of the opponents consistently suggests other inquiring questions that allow the latter to «discover the truth» (to show generic relationships and attitudes of the subject under discussion, to reach generalizations at a high intellectual level). «Round table» is a kind of discussion, during which the equal participants enter the process of discussing the problem in a definite order. «Brainstorming» is a kind of discussion that takes place in two stages: 1) the promotion by any participant of any ideas related to the topic of conversation and their fixation; 2) group discussion and the selection of optimal offers [14, p. 27]

*The method of cognitive games***.** The game is a kind of activity carried out in simulated situations, the motive of which is the reception of a psychological result (in the form of positive emotions, new knowledge, skills and abilities, decisions, victories, development of personal qualities and relationships with others). The simulation game is the type of game in which it is modeled not a social-economic system, but a medium (natural, economic, legal, socio-psychological and other principles (mechanisms) that determine the behavior and interaction of people.) The business game is the process of designing adoption pocket and solutions in the conditions of a step-by-step multi-step refinement of the factors of the current situation, analysis of information, which additionally comes in and appears in separate stages during the game.

Cognitive games (business, role, situational) model life situations, people's attitudes, interaction of things, phenomena; develop a world outlook, initiative, language culture of students; activate their productive educational activities; make it attractive and, as a result, facilitate the process of assimilating knowledge. They apply to the development of creative thinking. They can be a basic or auxiliary form of the educational process. The developing effect is achieved through improvisation, the natural manifestation of the free creative forces of the students. In educational terms, the game helps students to overcome uncertainty, promote self-assertion, best identify their strengths and capabilities.

The most commonly used method is learning games. This method was first developed in the early 1940's by American economists [9]. The game is a way of practical mastering of economic theory, economic relations.

With the help of games, you can simulate the real processes occurring in the economy. The main advantage of training games is the ability to apply theoretical knowledge in practice. No doubt that role-playing games are effective because the student has the opportunity to independently disclose the essence of a particular role. On the basis of educational games, a new direction of the economy – an experimental economy – has developed. The specificity of the experimental economy lies in the fact that it concerns issues whose research is incomplete. Due to this, this direction of the economy becomes a source of various pedagogical innovations.

The effectiveness of the game (as well as the principles of its construction) depends on the theory of training on which its creators and organizers are based. According to the researchers, the main theoretical basis for simulation games was behaviorism, in the late 60's there was a reorientation to the works of J. Bruner, who considered the best way to acquire practical skills the experience that gives the game, not lectures or other didactic methods [15]. In the game, as in life, knowledge and experience are acquired by trial and error. However, the price of the error in the game is not so significant as it is in real life.

In socio-economic subjects, it is necessary to model not only phenomena, structure, processes, but also social activity. The effectiveness of simulation games as a means of knowledge and achievement, skills and abilities is due to synthesis within the framework of one activity of game and cognitive interests [5].

At present, the introduction of the case study method into the teaching activity is relevant. The urgency of this method is as follows: in our time, the development of education is directed not so much to the acquisition of knowledge as to the development of a student's professional skills and abilities, the formation of a new thinking [16]. It was first used in the educational process at the Law School of Harvard University in 1870. However, Harvard Business School plays a leading role in the dissemination of situational analysis. The first collections of cases were published in 1925 in the Harvard University report. The basic concept of this method is a case-description of a complex situation with concomitant facts, the understanding of which requires division into separate parts. The next step is to analyze each part and combine the findings to obtain a holistic situation. The case study method allows solving the following tasks: isolating a complex of problems in a particular situation; definition of its structure; determining the factors that caused the occurrence of this situation; her modeling; construction of a system of assessments, forecasting of the future state; development of recommendations and a program of actions on the solution of the situation. Application of the method of situation analysis helps to improve the analytical thinking of students; the result is not only knowledge, but also professional skills [17].

The «Video on request» method was studied by American scientists. Teachers with a variety of technological capabilities are joining the world of using computers in training. The results of using the Video on Demand method prove its effectiveness. The developed video clips have shown their effectiveness and are in great demand by the professors of the economy.

One of the main advantages of using such a project is the possibility of using local economic events that were covered in local TV programs and on state television. Local economic news is used for realistic application of economic concepts, which students have already familiarized with. An example might be bankruptcy or the successful growth of a local business familiar to students, with the aim of illustrating the concepts of supply and demand with the help of computerized video clips. These clips are upgraded and made more relevant to make learning more expressive and relevant. Modern American economists believe that seminars devoted to the development of critical thinking are an ideal medium for integrating themed feature films into the bachelor's curriculum of the economy. For successful use of films as a means of teaching and demonstrating critical thinking skills, the instructor must identify the main questions in order to guide the discussion and adhere to the topic. In addition, each film must be devoted to a new issue, to avoid reiteration in the subject [9].

Also, one of the most effective ways of transferring economic concepts to students is to conduct experiments and demonstrations. For example, by suggesting to the student to eat candy one after another and to appreciate the pleasure gained from it, one can clearly demonstrate the effect of the law of decreasing marginal utility.

2. Interactive forms of lectures in economic theory's teaching

The most common method of teaching economics is lectures. With all the apparent simplicity, the lecture form of education requires a high level of pedagogical competence, mastery and oratory.

The lecture in the educational process fulfills the basic functions:

- informational (presentation of necessary information);
- stimulating (arousing interest in the topic)
- developing (evaluates phenomena, develops thinking)
- orientates (in problem, literature)
- clarifies (aimed at forming the basic concepts of science);
- persuasive (with emphasis on the evidence system);
- systematizes and structures (knowledge in this discipline)
- educational.

Lecture is one of the forms of training's organization, in which the teacher systematically, consistently, predominantly in a monologue mode, teaches and explains the teaching material throughout the subject, and students listen and record the content of the lecture, and in some situations, ask questions that the teacher answers.

The method of presentation of the material is distinguished by the following types of lectures: traditional, problem, lecture-visualization, lecture with two, lecture-provocation, lecture-press conference, lecture-talking, discussion, lecture with the analysis of specific situations. The most popular methods of reading a lecture is the introduction of a component of student participation, which has many variations. The most famous of them are: the

collection of theoretical material by students on the subject of the lecture, the formation of their comments for each block of lecture material, the organization of students in groups with a view to presenting a review on the content of each lecture, writing a resume, which will be incorporated into the document for the review of the course [11].

At the same time, there are «opponents» of lectures, as the main form of study at the university, which argue that:

– the lecture accustoms to passive perception of others' thoughts, inhibits independent thinking, so «the better the lecture is, the more such possibilities appear»;
– the lecture reflects the habit of independent work;
– lectures are needed only with the lack of educational literature;
– some students have time to comprehend the material that is presented, while others only mechanically record the text of the lecturer.

However, experience shows that refusal from lectures reduces the scientific level of student preparation, violates the consistency and regularity of work during the semester. Therefore, the lecture, as before, remains the leading form of organization of the educational process in the university. The aforementioned disadvantages can, to a large extent, be overcome by a rational combination of traditional and non-traditional forms of lectures in the educational process.

Let's dwell briefly on non-traditional forms of organizing lectures and some features of their construction (organization).

Problematic lecture begins with the formulation of problematic issues, to highlight the problem that during the presentation / study of the material need to be solved, and the hidden problem requires a non-uniform solution, and the finished solution scheme in the past experience is not.

Problematic lecture ensures achievement of the following didactic goals:

– acquiring of theoretical knowledge by students;
– the development of theoretical thinking;
– formation of cognitive interest in the content of the subject and professional motivation of the future specialist.

The success of the problematic lecture is achieved by the interaction of the teacher and the students. The main task of the teacher lies not only in the transfer of information, but in attracting students to objective contradictions in the development of scientific knowledge and methods for their resolution. It forms the thinking of students, causes their cognitive activity. One can distinguish the following features of the problematic lecture.

1. Information received at lectures (new knowledge) is introduced as unknown to students and is assimilated as a personal discovery, which creates students the illusion of «discovery» already known in science.

2. The student's knowledge is approaching a search, research activity in which the student's thinking and his personal attitude towards the material are involved, due to the formation of a learning problem.

3. During the lecture, students' thinking takes place through the creation of a problem situation by teacher before they receive all the necessary information.

Thus, the lecture becomes problematic if it implements the principle of problem and two interconnected conditions are fulfilled:

1) implementation of the principle of problem in the selection and didactic processing of the content of the training course;

2) realization of problem's principle deployed this content directly at the lecture.

Problematic lectures provide creative assimilation by the future specialists of the principles and regularities of the studied science, activate educational and cognitive activity of students, their independent classroom and non-audit work, assimilation of knowledge and their application in practice.

Lecture-visualization is the result of using the principle of visibility, the content of which varies with the emergence of new forms and methods of active learning.

Psychological and pedagogical researches show that visibility not only contributes to the successful perception and memorization of educational material, but also allows for the activation of mental activity. During the lecture-visualization, students convert oral and written information into a visual form that facilitates the selection and systematization of the most significant elements of discipline. When moving from text to visual form or from one kind of visuality to another, some information may be lost. But this is an advantage because it allows you to focus on the most important aspects of the lecture, contributing to its better understanding and assimilation. Allocate the following important features of the preparation of the lecture-visualization:

1. Preparation of a lecture requires a teacher to modify the lecture material in a visual form for presentation to students through technical means of instruction or manually (diagrams, drawings, drawings, etc.).

2. Reading a lecture (a story) transforms into a connected, detailed presentation (commenting) by the teacher of prepared visual materials that fully reveal the subject of this lecture.

3. Information should be presented in such a way as to ensure, on the one hand, the systematization of knowledge available and newly received by students, anticipation of problem situations and the possibilities for their solution, and, on the other hand, to use different means of visibility.

4. It is important to determine the rhythm of teaching materials and visual logic. For this purpose, a complex of technical means of instruction is used: drawing, as well as color, graphics, combination of verbal and visual information. Lecture-visualization is better to use at the stage of entering students into a new discipline, topic or section.

The lecture-provocation was developed with the purpose of developing students' skills to quickly analyze professional situations, to act as experts, opponents, reviewers, to identify incorrect or inaccurate information. Lecture-provocation provokes a high level of intellectual and emotional activity, since students in practice use existing knowledge and carry out joint teaching work with the teacher.

In preparing a lecture-provocation, it is necessary to put in the content of the lecture a certain amount of errors of a substantive, methodological or behavioral nature. The teacher picks up the mistakes and sets out the lecture material in such a way that the mistakes are carefully concealed and not obvious to the students. It requires additional and even creative work of the teacher on lecture material, high level of lecturer's mastery.

During the lecture, students note the mistakes noted in the synopsis and call them at the end of the lecture. The lecture with planned mistakes provides the function of stimulation and control. The instructor can assess the level of students' preparation for the subject, and check the degree of their orientation in the material.

This type of lecture is best done at the end of the topic or section of the discipline, when students form the basic concept and ideas.

Lecture by two persons (dialogue). Educational material of problem content is taught to students in a live dialogue between two teachers. Here the real situations of discussion of theoretical questions from different positions are simulated by two specialists.

Features of organization of lecture by two persons:

- joint search for solving from a problematic situation, with obligatory engagement of students who ask questions, express their attitude to the material of the lecture

- in the course of the lecture-dialogue it is necessary to use the knowledge available for the students to declare the educational problem and to work together further: to propose hypotheses regarding its decision, to deploy a system of proofs or refutations, justification of a joint decision;

- the lecture by two persons requires the active inclusion of students in the process of thinking, comparing and choosing a point of view or developing one's own;

- intellectual and personal compatibility, ability to improvise, and the rate of reaction of teachers provide a trusting attitude to such a form of work.

The use of the lecture together is effective for the formation of theoretical thinking, the development of students' beliefs, the ability to conduct dialogue and the culture of conducting the discussion.

Lecture press conference. The basis of the form of a press conference taking into account some features:

1. The instructor announces the topic of the lecture and invites students to submit questions in writing in writing to the subject. Each student formulates questions within 2-3 minutes and passes them to the teacher.

2. The teacher sorts questions for semantic content within 3-5 minutes and goes over to the presentation of the lecture material.

3. The presentation of the material takes place in the form of a logically connected disclosure of the topic by the teacher.

4. At the end of the lecture the teacher conducts a final assessment of the questions as a reflection of the knowledge and interests of the listeners.

Activation of the students' activity at the lecture of the press conference is achieved through the targeted informing of each student, what is the distinctive feature of this form. The need for a competent statement of the question activates mental activity, and the expectation of an answer to your question concentrates the student's attention.

Lecture-conversation or «dialogue with an audience» is the most common and relatively simple form of active engagement of students in the educational process known since Socrates. It involves the direct contact of the teacher with the audience by drawing students' attention to the most important issues of the topic, determining the content and tempo of the presentation of the teaching material, taking into account the particularities of the students. The effectiveness of a lecture-conversation in a group learning environment may decrease because of the impossibility of attracting each student into a two-way exchange of thoughts even with a small group.

*Lecture-discussion***.** In the lecture-discussion, the teacher during the presentation of the lecture material organizes a free exchange of opinions, ideas and views on the subject under consideration in intervals between the logical sections.

The effect of the lecture-discussion is achieved with the correct selection of questions and topics for discussion, which are determined and compiled by the teacher, depending on the didactic tasks and the characteristics of the audience. A successful finding is often the transition to discussion and analysis of specific work situations or real professional tasks with subsequent conclusions. The advantage of the discussion is that students will have desire to agree with the teacher's point of view than during a lecture-conversation, in which the instructor practically pushes students to accept his position on the subject under discussion. Negative moment may be the lack of students' ability to discuss and highlight the main thing, and eventually the general confusion of the situation.

A lecture with disassembly of specific situations in a form is similar to a lecture-discussion in which questions for discussion are replaced by a particular situation. It can be presented orally or in the form of a short and capacious video containing information that is sufficient for discussion. A discussion of microcirculation can also be a prelude to a further traditional lecture and is used to create an intriguing effect, focusing the audience's attention on the material being studied. The discussion of microcosms takes place throughout the student audience, and the teacher intensifies her participation with questions addressed to individual students, representing different opinions; directs to the necessary channel and unobtrusively leads to a collective generalization.

In addition, the effectiveness of the lecture depends not only on its content, but also on the personal and oral skills of the lecturer. Among them we distinguish the following: eloquence, diction, confidence and persuasiveness of speech, logic and culture of speech, charm, tactics, intelligence and intelligence of the lecturer. In addition, in the course of the lecture, it is extremely important to continuously maintain a high level of student motivation [18]. When teaching and studying economic disciplines it is necessary to take into account the specifics of a separate economic discipline with respect to its teaching by the traditional method or applying the latest information technologies. The traditional approach is effective in teaching disciplines in micro and macroeconomics, where the teacher intensifies the disclosure of topics by concrete examples, problem situations. As experience shows, the best absorption of the corresponding material by the student takes place precisely because of saturation with practical examples, situations, while the student actively participates in the process of perception and assimilation of information, has in relation to her the position that allows applying the learned in practice, creatively rethink, correlate the results of the activity with the prospects of the future profession [19].

The usage of interactive methods during the lecture is an effective means for activating the educational and informative activity of students aimed at thinking's developing for future specialists, forming creative skills of non-standard decision-making for certain problems with the aim of improving professional communication skills.

Conclusions.

Today, Ukraine is actively pursuing the policy of national education's integration into the European educational space. An important role in this process is played by the economic theory, which, according to international experience, represents a significant discipline in all leading universities of the world. It offers a special methodology and tools for analyzing socioeconomic processes taking place in society. Economic theory is a fundamental discipline and the basis of the formation of an economic way of thinking. As a result of this course, students receive a holistic view of the principles economy's functioning, modern economic concepts and models, mastering the analytical apparatus of the study of economic problems, obtaining skills for solving problems, forming the economic consciousness and the ability to analyze the content of economic policy.

To study economic theory, it is necessary to solve the main tasks faced by a teacher in conducting classes: to interest students in their subject, to awaken the desire to actively participate in seminars and attend lectures. The decisive factor is the choice of an interesting, crafty, but at the same time, understandable and accessible innovative teaching method.

The traditional lecture notes system is outdated. The use of interactive technologies in the teaching of economic theory can greatly improve the level of mastering material by students and, so, increase their level of knowledge, which is the key to the formation of new workers type, which will ensure decent competition in the labor market.

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THE PROFESSIONAL THINKING OF INDIVIDUAL: COGNITIVE-STYLE DETERMINATION, PERSONAL RESOURCE

Abstract. *The features of becoming of the professional the thinking of individual, based on analysis of cognitive-style determination and personal resource of students (on research group of police academy) and officers or employees of operative units of City Police Department (CPD) are presented. Essence, structure and functions of the professional thinking of personality in the system CPD it is appropriate to examine "professional development" and "professional becoming" of personality in the context of categories. The basic difference of development and becoming is that professional development is a heterogeneous process, while becoming is spontaneous changeability to the phenomena - by their continuous transition, transformation. The comparative analysis of sensitive stages of professional development of cognitions is conducted. The model of the professional thinking officers and employees of operative units CPD Ukraine, stages of his becoming and development, are described. The concept of the professional thinking and its constituents is specified. Presented factor model of the professional thinking of operative employees of CPD, which was certain by an expert estimation. A generalized model of professional thinking on the results of expert assessments provided by the seven factors.*

Introduction.

Formation and development of the thinking subject in various activities represented an important general psychological scientific problem. Despite the fact that the mind has received the status of the system of scientific concepts, it is today, in terms multi-paradigm psychology, has not lost his problem and phenomenological. There is a category of the professional thinking to problem enough from methodological and conceptual positions modern psychology. We suppose opinion that it is related to existence of opposite on the orientation approaches: from one side is an attempt to unify thinking of subject of certain profession, from other - to differentiate in connection with professional tasks and competencies.

1. The program of psychological diagnostics of professional thinking

The program of psychological diagnostics of professional thinking of the person in the officers police CPD to be appropriate to consider in terms of systemic approach. Thus in the system of process four subsystems are educed: theoretical (methodological), methodical, organizational and executive. Basic principles of psycho-diagnostic programmer are: the principle of creation of appropriate conditions for the holding of psychodiagnostic work, the principle of comprehensiveness, scientific principles, the principle of structure, the principle of practicality, and the principle of time the principle of differentiation.

Empiric research of the professional thinking of personality must include researches: properties of thinking, operations of thinking, kinds, styles of thinking, strategies of thinking, cognitive styles, self-regulation of behavior, psychological protections, predictive capabilities, orientation of personality processes, and others like that. In the empirical research of formation of professional thinking of the personality appropriate to use the following psychodiagnostic methods: "the Study of rigidity of thought processes with A. S. Latchiss"; "Intellectual lability"; "Quantitative relations"; "a Study of productive and reproductive thinking"; "Icon"; "Free Association test"; "Verbal patterns"; "Search patterns"; method Brunner; "Types of thinking" (K. Solyanik) "Practical thinking of adults" (M. K. Akimova, etc.) questionnaire "Diagnostics of typologies of psychological protection" (R. Plutchik in the adaptation of L. I. Wasserman, etc.); "Styles of thinking" (an adapted version of the questionnaire IQ R. Bramson and A. Harrison (translation and adaptation O. Alekseevoi), "the Style of behaviour self-control" (BSC) V. I. Morosanova, "Free sorting of objects"; Comparison of similar drawings"; "figures of Getchild"; Test Stroop; Test of Ravena; "Imaginary movement" (Klein, Gardner, and Schlesinger); the Method of estimating the size of the circle in terms of distracting clutter "Constantly circle" (Gardner, Holzman, Klein, Linton, Spence); "Forecasting tasks" (P. Regush, N. Somavia) "Ability to predict" (P. Regus) questionnaire J. T. Rotter, "Level of subjective control"; "the Questionnaire of emotional intelligence" by D. V Lucia.

Features formation professional thinking of the person in the City Police Department (CPD) of Ukraine, it is appropriate to consider at sensitive stages its development: educational-academic stage (corresponds to the cadets of the 2nd year), educational-professional stage of training (equivalent to 4th year cadets), in terms of performing vocational duties (corresponds to operational police officers with experience not more than 5 years). According to the results of expert evaluations of the proposed factor model of professional thinking the person in the ATS (for example, employees of operational units), which is represented by Shem factors: "Reflexivity and clarity of thought", "Instrumental quick thinking, Flexible integrity, Efficiency, practicality ","Reasonable", "Adequate reflection of the complexity of the situation", "Coherent control of thinking".

2. The Factor model of professional thinking.

Presented factor model of the professional thinking of operative employees of CPD, which was certain by an expert estimation. A generalized model of professional thinking on the results of expert assessments provided by the seven factors (Table 1). Factor one "Reflexivity and clarity of thinking" - includes 34 parameters and explains 22, 56% of the total variance. Factor second "Instrumental the speed of thought" explains 13, 02% of the total variance and consists of 20 criteria. The third factor "Flexible integrity" explains 12, 9% of the total variance and consists of 17 criteria. The fourth factor of "Efficiency and practicality", explains 11, 9% of the total variance. The fifth factor "Gumption" explains 9, 9% of the total variance and contains eight criteria.

Table 1

Factor model the professional thinking in the officers CPD.

I. The reflectivity and clarity of thinking The reflectivity (ability to determine the results of intellectual activity; the ability to adequately assess the results of their intellectual activity; the ability to assess the effectiveness of cognitive activity); clarity; formalism; systematization; Simple cognitive style. Contraindications: (inertness; gambling strategy of problem solving)	**VII. Integral control of thinking** Holisticity thinking; Suggestive thinking; Conceptual thinking; High level of proficiency adaptability of thinking.	**VI. Adequate reflection of complication of situation** Smoothing cognitive style; reproductive performance; Logic-symbolic thinking; Doctrinalist; accuracy; Monarchical style of problem solving; Scanning (surface) cognitive control; Multi direction thinking
II. Instrumental speed of thinking Increased connectivity thinking; Analytic thinking; Breadth of mind; Synthetic style; Speed of thinking	**Model of the professional thinking of personality**	
III. Flexible integrity High speed of information perception; Thinking flexibility;; Focusing cognitive control; Spatial-figurative thinking; The fractal-holographic cognitive style; Contraindications (rigidity)	**IV. Efficiency, practicality** Thinking ability (to consider the problem from several positions, to recognize the fact that in General, highlight the main thing is to recognize the fact in General); originality of thinking Evaluative style of problem solving; Analytic cognitive style (narrow range of equivalence) Complex cognitive style; Assimilationist cognitive style; Intuitive thinking; Associative thinking. Contraindications (impulsive cognitive style)	**V.Gumption** Deductivist; The ability to mask the course of his thinking; flexibility;Conceptual thinking; Development of operation of synthesis; Verbally-logical thinking; Vortical style of thinking; Deductive thinking; Penetrating.

The sixth factor is "Adequately reflected the complexity of the situation" explains the 8, 93% of the total variance and consists of eight scales. The seventh factor is "a Holistic overview of thinking" explains 7, 84% of the total variance and contains five of criteria.

Let us consider each of the factors and their indexes that are most significant to its load. The first factor "Reflexivity and clarity of thought" - includes 34 parameters and explains of 22.56% of the total variance. Three of the six main variables of this factor relate to different aspects of reflexivity: the ability to adequately assess the results of his mental activities (factor loadings of 0.91; the average value of 2.04) and close to it "to determine the results of intellectual activity" (factor loadings of 0.88; the mean value of 2.44), and "the

ability to evaluate the effectiveness of cognitive activities" (factor loading of 0.88; the mean value of 2.20). Two variables with leading values, this formalism as a high-level demands of logical rigor, correctness, orderliness of legal thought (factor load of 0.87; the average value of 0.56), and systematization as a "mental activity, in which the investigated objects are arranged in a certain system on the basis of a certain principle "(factor load of 0.87; the average value of 2.40), and simple cognitive style (factor loading of 0.88; the mean value of 1.47). It is obvious that in our classification the first characteristic relates to the analyticity, and the second to the organization. Finally, to determine the content of this factor allow variables that are included in the first factor with negative load and those which are evaluated by experts as spam: inertia (factor loading -0,84; the average value -1,44) and expressiveness gambling strategies of problem solving (factor loading -0,87; the average value of -0,89). The last is that, "as in the conservative strategy, the person tested for the hypothesis, previously formulated by them, and try to guess who conceived of the concept, checking the significance of two or more signs.

The divergence of information, their view leads them to a dead end; the success of this strategy can only be accidental". In our view, they point to the representation among experts on the need to give a guaranteed result, and that this requires a fairly high level of complexity. In addition, we assume that in the view of experts, the clarity of the result is closely connected with the reflexivity - on this point particularly close correlation between the characteristics of these categories. Given all this, we found it possible to call this factor "Reflexivity and clarity of thinking."

The second factor "Instrumental the speed of thought" explains of 13.02% of the total variance and consists of 20 criteria. The leading ones are the speed of thought (factor load of 0.9; the average value of 2.40) and synthetic style (factor loading of 0.88; average value of 1.29). Speed belongs, in our classification, to dynamic descriptions. Rich in content description the "breadth of mind", id est. "ability to overcome the wide circle of questions in the different areas of knowledge and practice", is near to them (factor loading 0, 79; mean value 2, 6). In this factor these variables very clearly prevail above other and judging on the factor loading, in a most degree determine his maintenance. From other it is needed to mark a thinking (factor loading 0, 72; mean value 2, 8) analyticity and instrumental description "enhance able connectedness of thinking" (factor loading 0, 73; mean value 1, 47). On the basis of expert estimations of parameters with the large factor loading, and also large stake in this factor of instrumental descriptions, we can name this factor "Instrumental speed of thinking".

The third factor "Flexible integrity" explains 12, 9% of the total variance and consists of 17 criteria. From them six belong to thinking "factors", such amount behave to the types of thinking, and other five reflect cognitive styles. Most parameters have the negative factor loading, therefore those loading of that are positive it is necessary to consider opposite. Quite clearly dominated by rigidity of thinking (factor loading of 0.91; the average value of

-2, 16), spatial-figurative thinking (factor load of 0.88; the mean value of 2.36) and fractal holographic cognitive style (factor load - 0, 83; average value of 1.71). Fundamental is the fact that the average expert assessment of their significance for operational-investigative work is high, and rigidity, on the contrary, is defined average as "the presence of contraindications".

Under the rigidity "not readiness is understood to the construction of new conceptual picture of the surrounding world at the receipt of additional information that conflicts with the old picture of the world". The opposite of rigidity is the spatial-visual thinking, which was described to examiners is difficult, as "simultaneous (concurrent) and synthetic, because it creates the ability to simultaneously cover multiple properties of an object in their relationship with each other and in interaction with the properties of other objects, ensures the integrity of perception". It is here necessary to underline that even in that even in the sense in which rigidity was presented to the experts, it refers to the difficulty of the transition from perception of figure to perception of background. Obviously, that it complicates integral perception.

In addition, the average scores in this factor are the cognitive style of "focusing cognitive control" (factor load of 0.74; the average value of 2.8), flexibility of mind (factor loading is 0.65; the average value of 2.67), and high speed of information perception (factor loading -0, 61; average value of 2.73). It, in our view, confirms that basis of maintenance of this factor is dynamic and integral treatment of information. Taking into account all of it, it is possible to name this factor as "Flexible integrity".

The fourth factor "Efficiency and practicality", explains 11.9% of the total variance. Of the twelve criteria, a third is cognitive styles and the largest weight in the assimilative style (factor loading of 0.88; the mean value of 2.04). With negative load, followed by evaluation the style of problem solving (factor loading is 0.84; the mean value of 2.09).

The following on weight is distinguishing thinking capabilities (internals): to examine a problem from different positions (factor loading 0, 72; mean value 2, 38) to distinguish main (factor loading 0, 71; mean value 2, 38) and to recognize a fact on the whole (factor loading 0, 76; mean value 2, 56). Analytical cognitive style (narrow range of equivalence) occupies the same place approximately, but his necessity is estimated by experts below (factor loading 0, 72; mean value 1, 48). Further follow expressiveness associative (factor loading 0, 65; mean value 2, 49) and intuitional (factor loading 0, 67; mean value 2, 87) types of thinking.

The sixth factor an "Adequate reflection of the complexity of the situation," explains the 8, 93% of the total variance and consists of 8 scales. The most weight is the smoothing cognitive style (factor load of 0.87; the mean value -1, 16), that is it for the perfect of officers police CPD undesirable. With a negative weight, it has included the reproductive performance of thinking (factor loading -0, 84; the average value -1, 18). Next in importance follow the logical-symbolic kind of thinking (factor loading of 0.78; the average

value of 1.49), doctrinarism (factor load of 0.77; average value of 1.07) and accuracy (factor loading of 0.75, with an average value of 2, 31). The monarchical style of problem solving (factor loading -0, 68; the average value is 0.11), scanning (surface) cognitive control (factor loadings of 0.53, with an average value of 0.09) and poly-oriented thinking (factor loading 0, 42; a mean value of 2.27). The amount of smoothing in the form of expert assessment is explained as a simplification of the situation, contrary to reproduction (stereotyped) thinking. Indeed, the more complex the assessment of the situation, the more options, and ideas occurs. Obviously, that so to the certain limit, but, in opinion of experts, in operatively-search activity superfluous is smoothing out undesirable. Taking into account it, a factor was adopted the "Adequate reflection of complication of situation". We will add that in such reflection an important role is played capacity for organization of text, due to that the sufficient amount of ideas is generated.

Seventh factor "Coherent control of thinking" explains 7.84% of the total variance and contains 5 of criteria. The content of this factor is determined by cognitive style "holist city thinking" (factor loadings of 0.90, a mean value of 2.69), the degree of development of conceptual thinking (factor loadings of 0.79, a mean value of 2.0) and the characterization of "suggestive thinking" (factor loading is 0.80, the mean value -2, 04). Last - with negative weight and mean value, id est. for experts exactly integrity resists to suggestibility and provided by an imitation correct standard for successful legal activity.

By them follow, with identical factor loading high level of learnability (factor loading 0, 69, mean value 2, 76) and thinking (factor loading 0, 69, mean value 2, 73) adaptively as ability to perfect problem specifications. Characteristic for this factor the obviously expressed polarity of estimations of experts: majority from them nearer to the "obligatory presence", and middle estimation of thinking suggestibility - to "contra-indication". Taking into account indicated, this factor can be named "Integral control of thinking". Thus, a design and expert estimations are one of the most adequate methods conceptualization the professional thinking of personality (including subjects of legal profile). The generalized model of the professional thinking on results expert estimations is presented as 7 factors. A factor is a 1 "Reflection and thinking clearness"; Factor 2 "Instrumental speed of thinking"; Factor 3 "Flexible integrity". A factor of 4 is "Efficiency, practicality". A factor of 5 is "Reasonableness". A factor of 6 is the "Adequate reflection of complication of situation". A factor of 7 is "Integral control of thinking".

3. The empirical model of formation of professional thinking

In order to generalize the results of the empirical research was used analysis of variance, which allowed us to obtain an empirical model of professional thinking of the individual by comparing the individual indicators of thinking in the study, which allowed us to ascertain some changes in its formation.

In General, the empirical model presented to the eighth factors. The obtained data allow establishing that to the investigated cadets the second-year (C2) maximal emotional

flexibility is peculiar to at a middle (neutral) protective analyticity. In the investigated cadets (C4) both these factor descriptions are negative is the most subzero from three groups protective analyticity and emotional flexibility.

In the study investigators officer police (CPD 5), maximum expression is protective analyticity, moderately severe - emotional flexibility. It should be mentioned that the factor designated as "Protective analyticity", reflects the tendency to narrow and concretize the cognitive model of the situation under the influence of such defenses as regression and reactive formation, and the "Emotional flexibility" reflects the flexibility of the forecasting based on a good understanding of their emotions and emotional intelligence in General.

Thus, we can say that the factor of emotional flexibility, the cadets the opposite (C2; C4), and operational staff officers police (CPD 5), occupy an intermediate position between them. The protective factors of analyticity opposite C4 are the cadets and officers police (CPD 5), and the cadets (C2) occupy an intermediate position between them. If to examine the group of officers police (CPD 5)as a standard of successful professionals, then it is necessary to confess a high protective analyticity professionally by important quality, similarly as well as neutral emotional flexibility. Additionally the obscure phenomenon of reduction of emotional flexibility and protective analyticity for the cadets (C4), and height affected while in the officers police (CPD 5) of these factors in accordance with middle level and maximum. Comparisons and interpretation of factors 3 and 4 the context of tasks of our research is played by an important value that will become clearer from a further analysis. The factor of "Realistic manipulation" reflects a tendency to remedy the situation in a psychological context and in the context of legal practice - the solving of the crime by managing the emotions of others. In this regard, it should be recalled that the analysis of the content of this factor leads us to the understanding that an unsolved crime is perceived by the person as a kind of defiance, the unfinished gestalt, which they should fix. So the primary here is not manipulation as an end in itself, namely remedy the situation. In connection with this confirms the supposition about the greater expressiveness of this factor in experienced police officers in comparison with cadets.

The content of the factor "lack of Independence emotional regulation" we have identified as the "extra vertebral emotional self-regulation". Subjects with high values of this factor have low scores in terms of autonomy emotional self-regulation and high - scale controlling their emotions (emotional intelligence questionnaire). This paradox is, in our opinion, is due to the following clarification: the emotions are controlled, "as necessary in this situation." It appears that a significant excess on expression of this factor in the study investigators officers police (CPD 5) are a consequence of their longer stay in the CPD in which the individual and his emotions do not play a role.

High expression of both these factors of police officers (CPD 5), in contrast to both groups of cadets (C2 and C4), in our opinion, is determined by the influence of the system CPD. In this regard, we believe that "Realistic manipulation" and "lack of

Independence emotional regulation" should be regarded as qualifying features of professional thinking of the person in the police Department. Investigated the cadets C4 are similar with the operational staff by the factor of realistic manipulation, and relative autonomy emotional self - regulation are considerably higher than the cadets (C2). Overall, this corresponds to, so to speak, their intermediate position in the profession: some of the professional skills already established, and identification with the system is still low.

Thus, we can draw the following conclusion about the Association and interpretation of the third and fourth factors: the formation of professional thinking of the person in the police Department, and professionalization in general, may be linear for individual indicators of thinking - factors model (e.g. the factor of "Realistic manipulation" in this case), but in General it is not linear (for example, the factor "lack of Independence emotional self-regulation"). Comparing the factors "Understanding of emotions of others" and "Antirejection analyticity" it should be noted that there is no linearity of the processes of formation of professional thinking.

The lowest indicators of ability emotions of other characteristic studied (C4) cadets while cadets (C2) possess these skills at a level almost identical with the study investigators police officers (CPD 5). We can assume that the system of education in the institutions of the Ministry of Interior contributes not to the full capabilities and skills of socio-perceptual processes. Most likely this can be attributed to excessive focus on their own emotional states and manifestations of the personality aided by the constant motivation for self-discipline.

Comparison of factors the "Internal acceptance of success" and "Indifference to the career" not by chance is reflects, in our view, correlation of underlying когнитивной structure and perception of external aspect of success - careers. For clearing up of value of this combination it is necessary to appeal to more detailed consideration of maintenance of factors. So, in the test with high severity of "internal making success" - police officers (CPD 5) - high scores on the internality in the field of achievements and low - expression of intellectualization as a psychological defense. In other words, they are more than cadets (C2, C4), tend to take responsibility in the field of achievements (which corresponds to the understanding of the concept of success) and less to defend themselves with the help of intellectualization that allow you to register in the minds of the incident, not living them. It turns out, or are they experiencing more or blocking of the experiences carried out in another way. This can be interpreted as a greater contact with reality to avoid feelings impossible, or to call personal maturity.

It is obvious that to a certain extent in this context, an important role belongs to the age differences, but we focus on the leading effects of the professional environment. The contents of the eighth factor are determined by the negative loadings of the scale of awareness in anticipating and internality in the field of industrial relations. "Indifference to

career" - we called it on the assumption that people concerned about their career aim to obtain as much information as possible (be knowledgeable) and to make predictions career based on them. We another example of non-linearity of the development, which was mentioned when considering the previous couple of factors. The factor of "indifference to a career" high marks from cadets (C2), the lowest - in cadets (C4), and investigated the police officers (CPD 5) occupy an intermediate position between them. That is, career aspirations maximum in the fourth year, and with experience they are reduced, occupying the middle position. Interestingly, the investigators police officers (CPD 5) take their success to the greatest extent, and the cadets of the second (C2) and the fourth (C4) courses on expression of this factor do not differ at the group level.

Thus, if we consider the combination of factor values, it turns out that the investigators police officers (CPD 5) high value for the seventh factor, which we called "Managing luck", but in terms of internality in industrial relations they are neutral. At cadets (C4) and «Managing luck», and «Indifference to a career» are minimal compared to the other groups, evidenced by a certain ease and equilibrium in career aspirations.

For cadets (C2, C4) is characterized by the combination of relatively low-level "handling good luck" and a low tendency to predict professional activities on the basis of awareness, which is unsurprising given their inherent lack of professional experience.

On becoming of the professional thinking it is possible to draw conclusion that at higher level from the examined indexes maximally expressed is an idea about divisibility by success at quiet enough attitude toward the professional successes and failures. It can be named professional maturity, and in the context of range of problems of the professional thinking - by prognostication on the basis of optimal (realistic) awareness.

As for the cadets, at equally low "handling success" the upper-classmen (C4) is most concerned with their future professional achievements. In the texts of the problems of the scale of internality in the field of industrial relations questionnaire "the Level of subjective control" uses the words "production" and "professional", and for sophomores (C2) is more relevant academic training. Thus, examining becoming of the professional thinking of personality in the system CPD it is necessary to specify at his non-linearity, that matches against him the processes of development. Linearity (quantitative changes on the different stages of professionalization) found out only on a few factors of the professional thinking: realistic manipulations, lack of initiative of emotional self-regulation and internal perception of success. On these factors the stage-by-stage is certain influence of the system CPD on development of the professional thinking, grounds to count their professional (system) determined. It is explained by the specific of the system CPD, oriented to creation of "universal" employee. On other factors not observed quality and quantitative changes from one stage of becoming to other, that grounds to count them, foremost, personality determined. Influence of the system CPD on their becoming is not decision.

The professional thinking is major component part of psychological potential officers police CPD, provides the rational decision of professionally-official tasks. Due to the fact that the overall level of development of cognitive sphere in General and of thinking, in particular, is a fundamental prerequisite for the success of professional activity, we consider it appropriate to agree with V. P. Trubochkina, the necessity of concentration of active methods of psychological training on the following aspects of thinking: - cultural mental psycho (the ability to perform analysis, synthesis, abstraction, generalization; possession of methods of reflexive thinking, modeling, use of heuristics, etc.);

- Vocational and theoretical knowledge (legal, regulatory-legal acts, administrative, sociological, political, psychological, etc.) and their adequate use;

- professionally-official knowledge (ways of decision of problems of strengthening of legality and the rule of law in modern conditions, ways of improving operational and service-combat activities, methods and techniques of solving professional problems, etc.);

- vocational and social knowledge (understanding of the nature and logic of the phenomena in everyday life, social justice, legal psychology, criminal factors, life conflicts, actions of people, age, ethnic, religious, etc. characteristics of the population, criminal groups, etc.).

Different directions and ways of development of the professional thinking of specialist are offered in modern scientific literature. In particular, it is possible to distinguish two directions. In the first a basic accent is done on direct practical activity, and in the second - comes true at educating in institution of higher learning and in the first years after completion of studies. This direction includes two levels - problem-methodological and problem operative. A Problem-methodological level provides for: it is Analysis of concrete situations and tasks that arise up in professional activity; it is Design of these situations and tasks in the process of the psychological trainingit is Study of these situations and tasks with the purpose ofworking off basic methodology of their decision andovercoming. The main thesis of problem-methodological level is circumstance that in the process of decision of integral problems requiring from the subject of account of many ambiguous terms, change constantly, ability to distinguish in a practical situation main task is formed in personality, to search information necessary for his decision, make decision and estimate the got results. The subject of methodological awareness may be the system of solutions of specific practical problems, the process of the movement of thought from the appearance of the general ideas for ways of its decision on the specific situation. Such methodological approach not only promotes formation of professional thinking, but also activates personal potential in general, contributes to personal growth. Problem-operative the level of becoming of the professional thinking of personality comes forward considerable part of professional preparation of specialist and increase of his qualification. At this level development of intellectual abilities comes true the method of analysis and decision of the concrete professionally oriented situations.

This level is more regulated, and concrete knowledge, abilities and skills of behavior, come forward the result of him in problem professional situations. Descriptions of each of the indicated directions, allow asserting that most effective will be their combination and use of complex methodologically operative approach in forming of the professional thinking of personality (with an orientation on the basic psychological features of professional activity of officers police CPD). Investigative activities are characterized by specific psychological features. These include: the multi-purpose nature of cognitive processes, the implementation of the mental action in the conditions of acute time pressure, the presence of objective and subjective reasons impede the learning process and others. These difficulties severely affect the possible risk of occupational mental mistakes. In our view, psychological theory and practice has value not only positive but also negative experience. The study of negative experience that is associated with the accumulation of professional thinking errors that often require careful consideration because they can be caused by insufficient vocational training of investigators, and not any special activity of others. In General, the reaction of the individual to a mistake defines the effectiveness of its professional activity. Mental error we consider as a result of the actions of the individual, inadequate put in a certain situation purpose, which starts with the wrong interpretation of the problem (situation) and select the paths for the ways of its decision. This requires, first of all, interaction with the subjects of CPD, is associated with role-playing repertoire operative. As the psychological nature of errors are very diverse, may not be a single, general psychological criterion of their classification. Our work attempts to complement the typology of thinking errors as follows:

1. On the Genesis of professional mental mistakes can be natural and casual. Natural caused, first, by the specificity of the mental state of the individual, which is the effect (dynamic, uneven), which requires an adequate reaction of the operational staff. Second, the workload of officers police CPD. A variety of functional responsibilities, operational blocks the activity of the employee; adversely affect the decision of a professional problem situation.

Random errors arise up because of impulsive, spontaneous actions of operative employee and expressed in form the instantaneous emotional discharging, derangement. Errors such in our research were fixed rarely and characterized as single. It is although possible to suppose that frequency of their display can carry steady, appropriate character.

2. The origin can also be allocated to different types of professional mental errors. Primary error sources are characterized by features reflecting the operational staff. Secondary, derivative sources of error associated with the response operations on the situation on the level of automated skills, dynamic stereotype. On the basis of external, situational characteristics operating officer for its action prevents the development of a comprehensive and deep communication with others. The analysis of scientific original sources shows a presence in a professional error not alone, and a few sources.

An officer's police CPD not always are able to realize their maintenance. There can be reason he spares more attention that, than other. Quite often exactly this other reason can come forward a factor, initiator the moment of origin of error. 3. Causing conditioning of the thinking errors associated with either the personal or professional qualities of officers police CPD. If the goals set are usually formed in the form of requirements, rules of order, etc., superimposed on the existing motives and needs of the officers police CPD, proactive internal goals do grow out of needs and motives. However, if there is the operative alienation of its individuals from the activity performed, there is the destructive impact of the activities of the personality, expressed in symptoms of professional deformation operations (imperative, dominance, categorically, emotional dryness, congruence of verbal and non-verbal actions, stereotyped, inconsistency, etc.). It, in turn, affects origin of cogitative errors in the process of decision of situation in that a danger of overstatement always is active (functional) or personality side. If the question is about negative influence of personality side, then it is here possible to distinguish such part of errors that is explained by unrealized enmity. Thus personality comes from the personal, egoistical interests, although often and motivated by professional considerations. To overcome such negative experience very difficult. 4. On the degree of correction errors are, easily yield and difficult yield to the correction. Errors, corrections yield easily, it is possible to consider on the example of those conflicts that arise up as a result of inadequate actions of operative employee on recognition and account of terms of operative situation. Errors arising up from one or another situational factor of co-operation potentially always can be well-regulated within the framework of this professional situation due to the possible correction of parameters of co-operation. Errors, difficult yielding corrections, because the excessive doubts of operative employee, which is accompanied by an "emotional loop, experienced" sharply. Lack of ability to put accents on positive to the certain degree it is possible to explain that professional failures are very often added to the lacks of surrounding and very rarely imperfections of methods of own work.

5. Professional effect thinking errors can be divided into large-scale and local. The price of failure is determined by the contents of the effects caused by it. One of the common mistakes police officers is the inability to discern the underlying properties; the core of personality, assessment by formal indicators, and the cost of failure determine the zone of its influence. Any mental mistake could have "more value" because it was regarded as a failure (failure) as a result of activity and may lead to distortion in the system of formation of moral and ethical values of the individual.

6. The procedural errors relate to the process of problem professional situations, so they can be dealt with in accordance with the basic cognitive stages: situation analysis, decision making, and implementation of decisions and evaluation of results.

Conclusions.

Professional thinking of officers police CPD - a set of intellectual skills and personal characteristics, the implementation of which ensures the successful implementation of professional activities is the ability of the individual to act and make decisions quickly in a significant situation with a certain temporal-spatial ahead regarding expected future events of importance in the case. It is found that a continuum of reflexing and anticipation (particularly predictability) is the integral psychological mechanism of regulation of professional thinking of the person in the City of Police Department. The continuum ensures the integrity of the thinking process in the spatial-temporal context, "past-present-future".

Basic conceptual methods of research and analysis of essence, structure and functions of thought are determined. The basic functions of professional thought are: the diagnostic, stimulant, informing, developing, compensatory, estimating, and self-developing functions.

Expert estimations the factor model of professional thought the personality in the system of Internal Affairs is offered on the example of employees of operative subsections. This model is presented by seven factors: “Reflection and clearness of thought”, “Instrumental smartness of thought”, “Flexible integrity”, “Efficiency, practicality”, “Interpretation”, “Adequate reflection the complication of situation”, “Integral control of thought”. The features of becoming and development of professional thought of students on the educational stage of special studies (2 courses) and on the educational-professional stage (4 courses) are founded. The features of development of professional thought of employees of operative subsections of system of Internal Affairs of Ukraine are found. Empiric model of becoming of professional thought of students of universities and employees of operative subsections of system of Internal Affairs of Ukraine, is presented by eight factors: “Protective analyticity”; “Emotional flexibility”; “Realistic manipulation”; “Lack of initiative the emotional self-regulation”; “Understanding of emotions others”; “Un-proactive analyticity”; “Internal perception of progress”; “Indifference is to the career”.

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PROFESSIONAL PREPARATION OF THE FUTURE PRIMARY SCHOOL TEACHERS ON THE BASES OF PEOPLE'S DECORATIVE -APPLIED ART (COMPETENT ASPECT)

Abstract. *The theoretical conceptualization of the problem of professional competence of the primary school teacher and its praxeological application, which made it possible to identify the correspondences of this phenomenon with the demands of modern society, has been carried out in the research. The Professional Standard "Primary School Teacher of the Institution of General Secondary Education" has been analyzed. It has been determined that the modern teachers should have the system of special qualities and abilities that will allow them to achieve significant results in the process of education and upbringing of younger schoolchildren. It is revealed that the set of professional knowledge and skills forms the basis of professional competence. The structure and the content of the professional competence of the primary school teacher has been explored and supplemented in the view of the focus on the theoretical and practical readiness of the pedagogue to professional activity on the basis of folk decorative-applied art and the successful realization of creative artistic and labour activity of pupils in primary school. The readiness of the future primary school teacher for professional activity on the basis of folk decorative-applied art is represented by the following main components: 1) motivational-personal, representing a set of persistent psychological qualities of the teacher (creative orientation, pedagogical orientation, high spiritual-moral potential, etc.) necessary for effective management of creative artistic and labour activity of junior schoolchildren; 2) scientific-theoretical, characterized by a certain amount of knowledge (artistic, project-technological, methodological) necessary and sufficient for the successful organization and implementation of professional activity on the basis of decorative-applied art; 3) functional-activity, which is conditioned by the specifics of professional-pedagogical activity, which is realized on the basis of folk decorative-applied art, and provides for the teacher of the primary classes the following basic labor functions: constructive, organizational, developmental, mobilizing, communicative, diagnostic, and gnostic.*

Introduction.

The emergence of Ukraine as a European democratic state in the period of geopolitical and economic instability, the influence of external and internal factors on educational institutions requires radical changes in the training of highly qualified, competent and at the same time patriotically oriented pedagogues. The social requirements to the modern graduate of a pedagogical institution of higher education cover two interrelated characteristics of the professional qualities of the future teacher: on the one hand, as a competent, initiative and creative teacher, on the other hand - as a carrier of a high universal human culture and national consciousness, a specialist prepared not only to

effective education, harmonious upbringing and diverse development of schoolchildren, but also able to drastically affect the formation of the spiritual-moral outlook and patriotism of the schoolchildren.

The first steps of Ukraine's integration into the European educational space are accompanied by, first and foremost, the updating of the content of professional training of primary school teachers, which is of a profound nature and requires solving a number of problems of the formation and development of a pedagogue, who understands his or her professional responsibility, is a person of culture, actively influences harmonious development and national self-consciousness of those whom he or she teaches and educates. In today's conditions there is a steady tendency to increase attention to the preparation of the modern primary school teacher, who should be prepared for the creation in school of a colorful ethno-cultural educational environment, a unique temple of folk and modern art, in which the historical memory, cultural code and the spirit of the nation reign.

Consequently, the New Ukrainian School requires teachers of the primary classes with a broad worldview, creative thinking, a high level of intelligence and profound spiritual-moral qualities, who possesses integrated knowledge of ethno-historical, artistic, project-technological, psychological-pedagogical and methodical character, practical skills, and abilities in the main types of folk decorative-applied art, developed creative abilities to artistic and labor activities.

1. Professional competence of the primary school teacher of as a pedagogical definition

The National Strategy for the Development of Education in Ukraine for the period up to 2021 emphasizes the importance of updating the main tasks of the national education system, pays attention to the need of implementing the goals and content of training in accordance with the competence approach and personal orientation, training of specialists, ready for independent decision-making, effective professional activity and self-development. Accordingly, one of the key tasks of the national pedagogical science, especially in the context of the formation of the New Ukrainian School, is to train a teacher with a high level of professional competence, who serves as an effective criterion for the diagnosis of the results of his or her professional-pedagogical activity.

The change of the approaches to primary education puts forward a number of important requirements for the primary school teacher's professional training, ensuring the adequate level of his or her professional competence. In accordance with the tasks of the scientific research and the definition of modern requirements for professional training of the teacher of primary classes the preliminary elucidation requires the substantiation of the essence of the categories "competence" and "professional competence of the teacher".

In a broad sense, competence is identified with knowledge, awareness, authority, ability to perform certain functions. That is, the competent - is the one who has sufficient knowledge in any branch; who is well aware of something; clever [1, p. 560].

The psychological science interprets competence is as the ability to integrate knowledge and skills with their use under the conditions of changing environmental requirements. In the pedagogical vocabulary the term "competence" is described as: 1) the personal capabilities of the individual and his or her qualifications (knowledge, experience) that enable him or her to successfully solve certain tasks; 2) the level of education of the individual, which is determined by the degree of mastering the theoretical means of cognitive or practical activity [2, p. 133]. In the National Educational Glossary, the term "competence" is interpreted as a set of knowledge, understanding, skills, values, and other personality traits that describe the results of learning by the educational program. Competence is the basis for the qualification of a graduate [3, p. 32].

Thus, competence can be treated as a general assessment term, which means *ability* and *readiness for activity*, and is used primarily for people of a certain socio-occupational status, characterizing the degree of conformity, understanding and ability to solve tasks of a certain level of complexity.

The reference units of competence are the activities of the subject, its personality traits, the level of difficulty of the tasks performed, etc. Clear in its logic triad: "personal qualities - activity - result" in the generalized form describes competence as a category that characterizes the personality traits of the subject of activity, but such an assessment is possible only in comparison with a certain reference index.

The term "professional competence", as a qualitative characteristic of the activity of a specialist, became widely used in the late 80's of the twentieth century, although the elements included in this category were used to evaluate the individual's activity in the works of scholars of previous historical periods.

Representatives of the western scientific school (M. Tsetron, P. Klein, P. Graham, E. Short, etc.) emphasize that the professional competence of the employee reflects the totality of such individual-psychological qualities of the person, as autonomy, discipline, communicativity, the need for self-development, the ability to turn and apply information, adapt quickly to specific conditions of activity, etc.

The problems of development of professional competence are sufficiently accurately characterized from the point of view of acmeology, which makes it possible to distinguish the main professional characteristics common to the specialists of all branches [4, p. 109]:

1) gnostic (cognitive) - reflects the presence of the necessary professional knowledge (their volume and level is the main characteristic of competence);

2) regulatory - provides the opportunity to use available professional knowledge to solve professionally-oriented tasks;

3) reflexive-status - enables the corresponding professional activity at the expense of recognition of the authority of a specialist;

4) normative - reflects the range of powers, the scope of professional "vision";

5) communicative - determines the possibility of establishing various types of contacts for the conduct of professional activity.

Summarizing the results of theoretical analysis, it is expedient to distinguish the following essential features of the concept of "professional competence":

- it characterizes the ability and readiness of the person to act as the subject of self-development in the system "human being - professional training - professional environment";

- it reflects the subject's position of the individual in the educational process, ensures the implementation of his or her personality traits in the future professional activity;

- it has a metadisciplinary (interdisciplinary) character;

- it implements the didactic principle of connecting learning with life and practice through acquiring and expanding practical experience in solving professionally-oriented tasks.

The concepts of "qualification" and "professionalism" are synonymously similar in importance to professional competence. Let us pecify the essence of these categories.

Qualification (from the Latin *qualis* - which is by quality and *fasio* - I do) is the degree of professional training of the employee, the presence of his or her knowledge, skills and abilities necessary for a particular type of work [5, p. 158]. Qualification is also defined as the degree of readiness for a particular activity, as a measure of assimilation of a profession or specialty characterized by the ability to perform tasks of a certain level of complexity. In accordance with the concept of the International Standard Classification of Occupations, qualification characterizes the ability of a person to perform tasks and responsibilities of a particular type of activity and is determined by the level and specialization of education [3, p. 29-30]. In the National Qualification Framework the latter is described as the official result of the assessment and recognition of the level of achievements by the person of certain competencies (learning outcomes) in accordance with the prescribed standards. That is, qualification is described in terms of learning outcomes that are revealed through the competences (implementation capabilities of the individual).

Thus, qualification is a degree of qualitative preparation for professional activity. Peculiarities of pedagogical activity determine the specifics of pedagogical qualification, which is determined by the level of education received; within it, there is, maintains and develops the professional quality of the teacher; it allows the teacher to perform labor functions of a certain level of difficulty.

Qualification is an integral part of competence, which contains professional interests of the individual, combining knowledge and skills, individual abilities, attitude to professional activity and social environment.

According to some scholars, the term "qualification" does not fully reflect the enhancement of cognitive information principles in modern educational-professional field, that is why the general trend of transition from the term "qualification" to the term

"competence" is increasingly spreading . In other words, in the system of higher pedagogical education there is a gradual change of the category "professional qualification" into the category of "professional competence". It is important to emphasize that qualification as a specialist readiness to perform job functions within a given profession (specialty) does not lose its relevance, but only enters the new quality – it becomes a part of professional competence.

Thus, qualification remains the unchanged element of the teacher's personality, both at a low level and at a high level of his or her professional competence, while the latter is the ever-changing quantity. Qualification does not determine the professional competence of the teacher, but only confirms his or her theoretical ability and readiness to carry out professional and pedagogical activity.

2. Professional competence of the teacher in the context of the development of the pedagogue's personality.

Interesting and necessary for our study is the refinement of the category of "professionalism" and its derivative – "professionalism of the teacher". Professionalism, in the broadest sense, is interpreted as the mastery by a person of the basics and depths of any profession. Professionalism refers to a set of psycho-physiological, psychological and personal changes of an individual that occurs in the process of mastering and long-term performance of activity, providing a qualitatively new, more effective level of solving complex professional tasks under special conditions [6, p. 33].

Analyzing the essence of the category of "professionalism of a teacher", it is necessary to rely both on the ideas of leading thinkers and pedagogues of the past (V. Sukhomlynskyi, A. Makarenko, K. Ushynskyi, etc.) and on modern scientific thought (E. Zeier, N. Kuzmina, V. Luhovyi, N. Pobirchenko, S. Savelyeva, V. Slastionin, and others).

Professional pedagogue, according to K. Ushynskyi, is the expert in the system of scientific knowledge about a person for the purpose of education, the creator of forming a pupil's personality. At the same time, A. Makarenko describes a professional teacher as a highly skilled specialist, who knows his or her job clearly and is always ready to work. The most complete description of the requirements for the personality of the teacher-professional is given by V. Sukhomlynskyi, according to whom the key ones in the teacher's activity should be: love for children, the joy of communicating with them, profound knowledge, broad worldview, interest in the problems of science, psychological-pedagogical knowledge, practical skills in various fields of labour activity.

In the pedagogical vocabulary, professionalism is described as a qualitative characteristic of the subject of activity, reflecting a high professional qualification and competence, a combination of effective professional skills and abilities, the possession of modern algorithms and methods for solving tasks that make it possible to carry out professional activity with high productivity. Professional competence is an integral part of professionalism and is one of its components [2, p. 276].

In view of the above mentioned, professionalism can be interpreted as a synthesis of the pedagogue's education and professional competence. Hence, professional competence is an integral part of the teacher's professionalism and at the same time an indicator of his or her level of education, providing the opportunity for constant professional and personal development.

Comprehensive analysis of scientific sources on the research issues allowed to outline the main approaches to understanding the essence of the concept of "professional competence of the teacher". In the context of the *axiological approach* (V. Vorontsova, B. Gershunskyi, M. Kahan, Yu. Pelekh, O. Savchenko, and others) competence is interpreted as an educational value. Professional competence involves the introduction of a person into such a universal cultural world of values, in which the individual realizes himself or herself as a professional.

In accordance with *the functional-activity approach* (H. Atanov, K. Durai-Novakova, V. Liaudis, V. Shadrikov, H. Shchukina, etc.) competence is considered as the unity of the theoretical and practical readiness of a specialist to carry out professional functions, which involves the formation of the complex of special abilities: analytical, predictive, projective, reflexive, organizational, communicative, and others.

Personality-activity approach (Sh. Amonashvili, I. Bekh, T. Humennikova, S. Sysoieva, I. Yakymanska and others) to the study of the phenomenon of professional competence makes it possible to consider the personality of the pedagogue and his or her professional activity in an inseparable unity, that is, it enables the holistic view to the pedagogue as a person of the profession. Accordingly, the peculiarities of the teacher's personality are manifested mainly by the specificity of pedagogical activity, which involves interaction with other people, as well as direct influence on them.

In the context of *the integrative approach* (O. Halytskykh, E. Haliamova, O. Kaverina, I. Kozlovska, etc.), the category "professional competence" does not correlate with general or professional knowledge. Competence, in the opinion of these scientists, is related to the basic qualification and at the same time allows a person to navigate in the wide range of issues not limited to narrow specialization, which ensures social and professional mobility of the individual, openness to changes and creative search, ability to self-expression, willingness to constantly update the knowledge and so on.

According to *the professional approach* (V. Bodrov, S. Vitvitska, O. Ivanova, etc.), professional competence is described as a set of professional requirements to the specialist, which are fixed in job profile diagram. However, such an approach is suitable only for describing operational competencies, that is, personal qualities and abilities that the individual should possess for the successful performance of professional functions.

Since the professional competence of the teacher is a composite polysurface characteristic of a specialist and, of course, can not be determined by a simple set of

personal qualities and abilities, then for the integrative description of its content and structure the integrative approach is considered to be the most expedient.

In professional formation of a pedagogue as a professional, not only his or her competences change, but also the number of formed competencies increases, reflecting the appearance of qualitative changes in the professional activity. This becomes possible under the condition of focusing on higher results of the own professional activity.

In general, the theoretical conceptualization of the problem of teacher's professional competence and its practical application make it possible to identify the correspondences of the mentioned phenomenon with the demands of modern society, taking into account new knowledge in the field of pedagogical science.

Professionally competent can be considered such activity of the teacher, in which at the sufficiently high level, pedagogical communication is realized, the personality of the pedagogue is realized, high results of teaching and education of pupils are achieved.

Summarizing the above mentioned, in the research, *the professional competence of the teacher will be considered as the integral personality-professional characteristic, which involves the formation of a pedagogue's scientific-theoretical knowledge and practical skills, special psychological-pedagogical training, valuable humanistic orientation; it is manifested in the ability to act adequately, independently and responsibly in any professional situation; it reflects readiness for reflection, self-esteem and professional self-development.*

Professional competence is *fully* manifested only in the work of a teacher-practitioner, that is, in the process of all kinds of professional activity, however, its preconditions and individual components are formed during the period of study in pedagogical higher educational institutions.

Let's find out the structure of the teacher's professional competence. Accordingly, the following specific components are distinguished here: 1) person-humanitarian orientation; 2) ability to systematically perceive the pedagogical reality; 3) free orientation in the subject field; 4) possession of modern pedagogical technologies; 5) ability to make productive use of innovative pedagogical experience; 6) creativity in pedagogical activity; 7) reflection, that is, a special way of thinking that involves distant view on pedagogical reality, etc.

Professional competence as an integral characteristic is determined by the ability of a pedagogue to solve professionally-oriented tasks using the appropriate system of knowledge, professional and life experience, values, inclinations, interests, preferences. By its nature, competence can be manifested only in organic unity with the values of a person, that is, under the condition of the profound interest in a particular type of activity. Thus, the professional competence of a teacher involves value self-determination in relation to the pedagogical profession, knowledge in the sphere of a certain educational subject, methodological and psychological readiness for professional activity in the education

system. That is, the basic structure of the teacher's professional competence is motivational, cognitive and activity components.

According to V. Slastionin, the basis of professional competence of the pedagogue make the following two groups of abilities [7]: 1) the ability to think pedagogically, that is, to determine pedagogical tasks and to program the methods of pedagogical activity, to analyze the results of pedagogical activity (analytical, predictive, projective, gnostic skills); 2) the ability to act pedagogically (organizational, communicative, managerial).

The professional skills of the teacher should be understood as his or her pedagogical abilities: gnostic, projective, constructive, organizational, communicative. The sign of professional competence of a teacher is the ability to correlate existing knowledge with the goals, conditions and methods of pedagogical influence. The core of professional competence of a teacher is psychological-pedagogical preparation, aimed at forming pedagogical skills and abilities. Pedagogical skills is a set of pedagogical actions based on theoretical knowledge and directed at the implementation of the tasks of education and development of the personality.

The analysis of scientific-pedagogical literature allowed to classify pedagogical skills by the nature of the teacher's professional activity and the peculiarities of performing the corresponding professional tasks (functions) to the following ones:

1) gnostic - acquisition of professional psychological-pedagogical knowledge, search for new information, systematization and generalization of the own pedagogical experience;

2) ideological - conducting of educational, cultural-educational work among pupils, propagation of pedagogical knowledge;

3) didactic - the formulation of educational goals, rational choice of pedagogical tools (ways, methods, forms, means of learning);

4) organizational-methodical - planning, organization and management of the educational process, the use of optimal means of pedagogical influence, formation of pupils' motivation to study, establishing pedagogical interaction;

5) communicative - construction of educational process taking into account the laws and regularities of the development of dialogical relationships; creating opportunities for dialogue among all subjects of learning; free and adequate expression of their feelings and experiences; ability to cooperate, team work, etc.;

6) predictive - prediction of the results of educational activity, conducting pedagogical diagnosis, analysis of possible ways to improve the quality of the educational process;

7) reflexive - the ability to adequately assess the own professional-pedagogical activity, self-education and self-development;

8) technical - maintenance and use of multimedia, office and computer equipment;

9) special - narrow-profile skills within a specific field of human activity (for example, folk decorative-applied art).

Immediately, it should be emphasized that the degree of formation of the above mentioned pedagogical skills determines the level of professional competence of the pedagogue.

3. The basic components of the professional competence of the primary school teacher.

In the updated version of the State Standard of Primary General Education [9], the main emphasis is on revising the content of education and coordinating it with the contemporary needs of Ukrainian society, the necessity for integration into the European educational space, and so on. Much attention is paid to the modernization of the educational process, the transition to the competence model of education, the orientation of educational programs for acquiring key competencies and the creation of effective mechanisms for their implementation, preparing pupils for practical solutions of vital important tasks.

The problem of forming the key competencies of pupils, the acquisition of primary pupils of the necessary activity experience creates special requirements for the teacher's professional training, the level of his or her professional competence and readiness to perform labor (professional-pedagogical) functions. The Professional Standard "Primary School Teacher of Institution of General Secondary Education" provides for a list of eight main functions of the pedagogue that enable effective fulfillment of the requirements of the profession: 1) planning and implementation of the educational process; 2) provision and support of upbringing, education and development of pupils in the educational environment and family; 3) creating of educational environment; 4) reflection and professional self-development; 5) conduct of pedagogical research; 6) providing methodical assistance to colleagues on the issues of education, development, upbringing and socialization of the primary school pupils at the institutions of general secondary education; 7) generalization of the own pedagogical experience and its presentation to the pedagogical community; 8) evaluation of the results of primary school teachers' work in the institutions of general secondary education [9].

The Professional Standard "Teacher of Primary School of the Institution of General Secondary Education" defines the guidelines for successful mastery of the pedagogical profession, points to the external and internal logics of its mastering, envisages the possibility of harmonious combination of universal, professional and special abilities of the primary school teacher.

The analysis of the Professional Standard "Teacher of Primary School of the Institution of General Secondary Education" [9] makes it possible to conclude that the modern teacher should have a system of special qualities and abilities that allow to achieve significant results in the process of teaching and upbringing of junior schoolchildren. The set of professional knowledge and abilities that corresponds to these qualities and skills is the basis of the professional competence of the primary school teacher.

Based on the system-functional analysis of pedagogical activity from the standpoint of a personality-activity approach that actualizes the study of integrative qualities of a personality in the context of professional activity, the general list of the main (basic) competences of the modern teacher of primary classes needs to be specified from the standpoint of the pedagogue's readiness to organize and successfully implement creative artistic –labour activity of junior pupils on the basis of folk decorative-applied art. That is, the structure and the content of the professional competence of the primary school teacher should be supplemented in the view of the focus on *the theoretical and practical readiness of the pedagogue* to professional activity on the basis of folk decorative-applied art and, accordingly, the successful implementation of creative artistic-labour activity of pupils in primary school.

Within the framework of the research, the readiness of a teacher to professional activity is considered by us on the one hand as a result of purposeful professional training, and on the other hand - as a component of professional competence, that is, a set of persistent characteristics of the personality and the activity of the pedagogue necessary for the successful implementation of the main labor functions.

The readiness of the future teacher of primary school for professional activity on the basis of folk decorative-applied art can be represented by the following *main components***:**

1. Motivational-personal - a set of persistent psychological qualities of a teacher, necessary for effective management of creative artistic and labour activity of junior pupils. At the same time, the personality of the teacher, as proved by N. Kuzmina [10], is a key factor in the formation of his or her pedagogical qualities.

Necessary for the successful implementation of the tasks of artistic and labor training of pupils of the 1-4 classes are the following *qualities of the teacher's personality*:

1) the creative orientation of the personality, which determines the system of human relations in the sphere of vital activity, determines the need of the teacher in the continuous updating and improvement of professional knowledge and skills, including in the field of folk decorative-applied art. Creative orientation characterizes constant interest to the national culture, everyday life, arts crafts and trade; the desire for perfection, beauty, harmony in the process of creating decorative-applied goods;

2) pedagogical orientation, which manifests itself in the motivation for professional activity as a teacher, orientation towards the versatile development of the pupil's personality, in particular, by means of folk decorative-applied art. The pedagogical orientation of the teacher's personality has its own peculiarities: it is connected with the very essence of pedagogical activity; acts as a conscious psychological readiness for pedagogical activity (including artistic and labor training of pupils); determines the responsible attitude to the results of the own professional activity and so on.

3) high spiritual-moral potential, which forms a clear awareness of the pedagogue in the necessity of building and developing Ukrainian society on spiritual, moral-ethical,

ethno-historical, cultural-artistic, national-patriotic principles and universal values. In this case, the teacher should have such qualities of personality, as humanism, democracy, tolerance, optimism, social responsibility, clear public stance, patriotism, etc.

The main structure-forming element of the motivational-personal component of the readiness of the primary school teacher to professional activity on the basis of folk decorative-applied art is the awareness of the relevance and necessity of ensuring the creative development of junior schoolchildren in the process of artistic and labor training.

2. Theoretical-theoretical – is characterized by a certain amount of knowledge, necessary and sufficient for the successful organization and implementation of artistic and labor activity on the basis of folk decorative-applied art.

The scientific-theoretical component is complex in its structure, therefore it involves a set of interconnected system of *knowledge*:

1) artistic - knowledge of the basics of graphic writing (sketch, composition, drawing); the national originality of traditional Ukrainian art, its artistic value, its role and its cultural significance; the main centers of folk art crafts and trades of Ukraine; morphology of types of folk decorative-applied art, etc .;

2) project- technological - knowledge of the theoretical foundations of artistic design, design and materials science; shaping and ornamentation; structure of work tools and control-measuring instruments, devices and equipment; technologies of manufacturing of decorative goods and so on;

3) methodical - knowledge of theoretical-methodical foundations of creative artistic and labour activity of primary school pupils (goals, tasks, contents, techniques, methods, technology, means, forms of organization of educational process, etc.);

Knowledge represented in the scientific-theoretical component is in close interaction and provides *the theoretical readiness* of the primary school teacher to professional activity on the basis of folk decorative-applied art as an integral part of the pedagogue's professional competence.

3. Functional activity - due to the specifics of professional-pedagogical activity of the primary school teacher, implemented on the basis of folk decorative-applied art, and provides the following main *labor functions:*

1) constructive - purposeful selection of optimal content, forms, methods and means of educational activity of pupils on the basis of folk decorative-applied art, adequate to the age and individual capabilities of junior pupils; setting goals and objectives of creative artistic and labor activity in primary school; selection of necessary materials and means for realization of educational goals and tasks, etc .;

2) organizational - organization of lesson and extra-curricular forms of educational activity of pupils on the basis of folk decorative-applied art; creation of organizational-pedagogical conditions for the successful artistic and labor activity of junior pupils, realization of their creative potential;

3) developing - the development of the personality of junior schoolchildren on the basis of folk decorative-applied arts; solving a wide range of educational and educational tasks aimed at the creative development of pupils;

4) mobilization - actualization of knowledge of junior schoolchildren, their personal experience of creative artistic and labor activity; formation of interest to folk decorative-applied art;

5) communicative - establishment of relationships with pupils in the process of artistic and labor training; creation of emotionally comfortable and educationally developing atmosphere of communication between participants in the educational process;

*6) diagnosti*c – determination of the degree of awareness of pupils in the sphere of folk decorative-applied art, the level of mastering skills and abilities of manufacturing decorative goods; control and evaluation of learning outcomes; studying the mechanisms of creative development of schoolchildren, etc.;

7) gnostic - acquisition and practical use of the knowledge necessary for the successful implementation of professional and pedagogical activity on the basis of folk decorative-applied art; self-education, generalization of the own pedagogical experience on the issues of creative artistic and labor training of junior pupils and its presentation to the pedagogical community.

These mentioned labor functions can be effectively implemented by a teacher only in case of the proper formation of the appropriate skills. Therefore, the functional-activity component of the primary school teacher's readiness to professional activity on the basis of folk decorative-applied art is made with the help of the system of such skills as: constructive, organizational, developmental, mobilizing, communicative, diagnostic and gnostic.

The main labor functions of a pedagogue, represented in the functional-activity component, are in close interaction and constitute the *practical readiness* of primary school teachers for professional activity on the basis of folk decorative-applied art as a component of their professional competence.

Thus, the result of training of the future primary school teachers is a high level of professional competence that determines their readiness for professional activity on the basis of folk decorative-applied art and it includes:

1) awareness of various types of folk decorative-applied art;

2) presence of the practical knowledge necessary for projecting and manufacturing decorative goods taking into account regional (local, native) traditions of folk decorative-applied art;

3) ability to manifest creativity in the process of artistic and labor activity, especially when creating forms of decorative-applied goods and patterns of ornaments;

4) understanding of ethno-historical, cultural-artistic and educational- upbringing value of folk decorative-applied art;

5) awareness of the requirements for artistic and labor activity of junior pupils, its creative nature;

6) ability to form primary school pupils' motivation to creative artistic and labor activity;

7) ability to plan creative artistic and labor activity of junior schoolchildren, to determine possible ways of achieving the goals set;

8) ability to predict and evaluate the results of creative artistic and labor activity of junior pupils;

9) ability to objectively evaluate the results of creative artistic and labor activity of junior pupils;

10) ability to reflection, creative self-improvement, professional self-development and increase of the own professional level.

Formation of the described qualities and abilities of the primary school teacher can be successfully realized only under the conditions of specially created system of professional training of students in pedagogical institutions of higher education, which is realized on the basis of folk decorative-applied art.

Conclusions.

In the course of the research, the theoretical conceptualization of the problem of professional competence of the primary school teacher and its praxeological application has been implemented, which made it possible to identify the correspondences of the mentioned phenomenon with the demands of the modern society. The analysis of the Professional Standard "Primary School Teacher of Institution of General Secondary Education" makes it possible to conclude that a modern teacher should have the system of special qualities and abilities that will allow to achieve significant results in the process of teaching and upbringing of junior schoolchildren. The combination of professional knowledge and skills that is maximally adequate to these qualities and abilities forms the basis of professional competence.

Professional competence of the primary school teacher is considered as the integral personality-professional characteristic, which involves the formation of a pedagogue's scientific and theoretical knowledge and practical skills, special psychological-pedagogical training, valuable humanistic orientation; it is manifested in the ability to act adequately, independently and responsibly in any professional situation; reflects readiness for reflection, self-rating and professional self-development.

The structure and the content of professional competence of the teacher of primary classes is expediently supplemented with a view of the focus on the theoretical and practical readiness of the pedagogue to professional activity on the basis of folk decorative-applied art and the successful implementation of creative artistic and labour activity of primary school pupils.

Readiness of the future teacher of primary classes for professional activity on the basis of folk decorative-applied art is represented by the following main components: 1) motivational-personal, representing a set of persistent psychological qualities of a teacher (creative orientation, pedagogical orientation, high spiritual-moral potential, etc.) necessary for effective management of creative artistic and labor activity of junior pupils; 2) scientific-theoretical, characterized by a certain amount of knowledge (artistic, projective-technological, methodological) necessary and sufficient for the successful organization and implementation of professional activity on the basis of folk decorative-applied art; 3) functional-activity, which is conditioned by the specifics of professional-pedagogical activity, realized on the basis of folk decorative-applied art, and provides for the teacher of the primary classes the following basic labour functions: constructive, organizational, developmental, mobilizing, communicative, diagnostic, and gnostic.

These labor functions are in close interaction and make practical readiness of the primary school teachers for professional activity on the basis of folk decorative-applied art as a component of their professional competence.

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THE RESULTS OF THE PEDAGOGICAL EXPERIMENT FOR THE FORMATION FUNCTIONAL COMPETENCE OF SOCIAL WORKERS ON THE STREET SOCIAL WORK

Abstract. *The article reveals the essence and specificity of the street social work and the functions of the street social worker caused by them. It is noted that the successful performance of the functions of the street social work is ensured by the appropriate competence of a specialist. The essence and structure of the functional competence of a street social worker is determined. The pedagogical conditions that ensured the effective formation of the students' competence while studying the special course "The Street Social Work: Theory and Practice" are determined . Didactic means of forming the functional competence of students in lectures, practical and field classes on the special course, during the independent work of students and so forth are highlighted. A criterion apparatus for diagnosing the state of its formation is disclosed. A method for diagnosing the level of formation of functional competence of the street social work in students is presented. This method is based on proven psychological methods, a specially developed test of academic achievement, and mathematical methods for summarizing the results. The results of the pedagogical experiment, directed on the formation of forthcoming social workers functional competence of the street social work, certifying the effectiveness of the implementation of the proposed didactic activities are presented.*

Introduction.

The street social work includes the mobile provision of social services and is intended to provide basic needs, the interests of a person in a period of personal or social distress by providing social, educational, socio-psychological, social, legal, medical and social support. So, the street social work is geared towards establishing contact, familiarizing potential clients with existing social services, sending them to social services, health care institutions, law enforcement bodies and so on. Clients of the street social work are usually citizens living in public places (streets, squares); they need to satisfy basic needs for food, clothing, shelter, security, but they are not clients of socially specialized services, public or state organizations. Despite the large number of such people, the street social work in Ukraine is episodic in nature and is carried out mainly in the framework of international projects.

The insufficient dissemination of the street social work in Ukraine is also indicated by the insufficient scientific and methodological publicity of its problems. Only a few theoretical and empirical studies on the street social work were conducted by such scientists as R. Kh. Vainola, E. M. Voronova, T. Yu. Zaitsevsky, A. I. Kapskaya, N. M. Komarova, M. P. Lukashevich, I. I. Migovich, T. V. Semigina, N. V. Tarasenko, G. L. Cherepanova, and others.

Professional training of forthcoming social workers in institutions of higher education on the street social work stems from , on the one hand, state standards, and on the other, an increase in the number of clients of the street social work (homeless people, drug addicts, representatives of the sex industry, etc.). Training of social work professionals in Ukraine is intended to ensure that the level of professional competence of forthcoming social workers is sufficient to help them to perform successfully various functions of the street social work, in particular, to identify families, individuals, children and teenagers in need of medical, legal, psychological, pedagogical and material assistance; to analyze and predict the fleeting trends in the requirements for the street social work and the possibilities of providing social services to its clients; improvement of technologies and methods of the street social work and many others. Therefore, the formation of the functional competence of forthcoming social workers on the street social work is considered one of the priority areas of their professional training in institutions of higher education in Ukraine.

1. The theoretical basis for the formation of the functional competence of the street social work in forthcoming social workers.

We consider that the street social work is a professional activity aimed at assisting individuals and social groups in overcoming personal and social problems by establishing and maintaining contact between them and specialists of social services, protection, correction and rehabilitation on the street.

The specificity of the street social work is determined by the following directions: assistance in establishing humane, etically and healthy relations in the social milieu ; assistance in creating an environment of psychological comfort and safety of people in a separate territory; participation in the development of the socio-cultural milieu , the revival of folk traditions and culture; organization of events aimed at the development of social initiatives; development of social infrastructure taking into account the specifics and needs of customers of a particular territory; career guidance activities; rendering support (employment, patronage, provision of housing) to citizens who find themselves in difficult life circumstances, in particular in connection with forced migration; definition of tasks, forms, methods and ways of solving personal and social problems of clients (socio-economic, medical-social, psycho-social, legal, etc.); providing social guarantees for clients (surety); analysis of the level of social services for the citizens in a particular territory; attraction of various governmental and non-governmental organizations to solving problems of social customer service; implementation of social projects and programs on a definite territory; assistance in elimination and overcoming specific difficulties in the process of

socialization of people from disadvantaged families and social strata; identifying the causes of maladaptation; involvement in resolving potential and urgent conflicts; mediation between the client and the institution, family, environment, various social services, departments, administrative bodies; rendering psychological, psychocorrectional and other assistance to eliminate the client's crisis situation; taking measures for social protection and customer support; organization of socially significant activities of various types; identifying children who require immediate social intervention or are subject to adoption; establishment of an information base of kids available for adoption , guardianship ; identifying and keeping records of persons wishing to take to a family children who need adoption or guardianship; promotion among the people of various forms of education and care of children left without parental care; provision of advice to the administration, social workers of children's public institutions; assistance to governmental and non-governmental organizations in identifying the causes and factors of social disadvantage of specific families and children; interaction with specialists of various social services.

The client of the street social work is a person who uses the services of social services, organizations and institutions by interacting with a street social worker. It has been determined that the street social worker is a specialist who provides social, psychological, legal support and street assistance to unprotected representatives of the population (retired people , refugees, orphans, etc.), as well as people who are in a state of mental instability caused by objective factors(wars , environmental disasters, international conflicts, religious differences) and subjective (tragedy in the family, loss of property) factors, in order to establish contact between social service specialists and target group potentially interested in such services.

The street social worker is a social work specialist who provides social, psychological, legal support and street assistance to vulnerable people (pensioners, refugees, orphans, etc.), as well as people who are in a state of mental instability caused by objective (wars, environmental disasters, international conflicts, religious differences) and subjective (tragedy in the family, loss of property) factors, in order to establish contact between specialists of social service and the target group potentially interested in such services.

Analysis of the nature and specifics of the street social work allowed to determine the following functions of a street social worker: social assistance, assistance in overcoming the effects of natural disasters and social conflicts, social-compensatory, diagnostic, prognostic, precautionary -preventive, human rights, social-pedagogical, medical-social, social household, communicative, promotional and propaganda, moral and humanistic, organizational.

The functions that perform the specialist social work on the street, put certain requirement, which is reflected in *his functional competence* - qualitative characteristics based on professional knowledge, skills, and professionally important personal qualities of a

specialist, due to the multifunctionality of his professional activities and provide effective performance of functional duties in the area of responsibility.

The functional competence of a street social worker is based on his technological, interactive, interdisciplinary competences, success competencies, and the like. Each of these competencies presupposes that the student has the relevant knowledge, skills, personal and professional qualities that ensure the successful fulfillment of the functions of the street social work.

Thus, *the technological competence* implies acquaintance with social work as a professional activity, the essence and specifics of the street social work and its clients, the functions of a street social work; implementation of moral standards, ethics, legal framework of a social work; possession of its technologies and methods. *The interactive competence* is based on the need to establish contacts and exchange information with clients of the street social work, colleagues, interdisciplinary groups, and authorities; act even in the absence of understanding, coordinate goals and objectives, constructively resolve conflicts; carry out promotional activities and the like. *The interdisciplinary competence* implies awareness of modern theories of related sciences for solving the problems of clients of the street social work in particular, as well as social, pedagogical, and ethical problems of society as a whole. *The competence of success* is manifested in the attitude of the social worker to continuous self-development, the analysis of the achievements of other specialists and the application of the best practice of domestic and foreign social work, the planning of their professional development and self-control in their professional activities.

2. The state of formation of the functional competence of further social workers on the street social work.

The identification of the state of development of the functional competence of further social workers from on a social work included an analysis of their professional training, which was carried out in three directions: they carried out pilot diagnostics of teachers involved in the training of further social workers in the HEL, which was intended to find out the degree of their awareness of the essence of the street social work and its clients; they carried out pilot diagnostics of social service specialists providing social assistance to potential clients of the street social work in order to determine directions for improving the training of future social workers designed to create their functional competence of a street social work; analyzed the training of future social workers for the street social work in Ukraine and abroad. The analysis allowed to come to a conclusion about the need for purposeful professional training of future social workers in order to carry out the functions of the street social work, as well as to search for and substantiate the necessary didactic means of forming their respective functional competence.

In order to diagnose the levels of development of the functional competence of future social workers in the street social work, a criterion apparatus and a diagnostic method have been developed. Thus, the criteria for the formation of the functional competence of

students on the street social work were: "awareness - lack of awareness of knowledge", "flexibility - rigidity of skills" and "stability - the instability of the manifestation of professionally important and personal qualities." It should be noted that the criterion “consciousness- unconsciousness of knowledge” made it possible to determine if the further social worker has a concrete, clear understanding of the phenomena being studied, how he or she understands the patterns of their manifestation, as well as the tools for establishing relationships and relations between them, distinguishes essential and insignificant connections, and also understands the need to acquire knowledge of the street social work, has a variety of ways to obtain them. Therefore, the indicators of the criterion "awareness - unconsciousness of knowledge" were chosen the following : informality, personal significance of knowledge; efficiency, effectiveness of knowledge; knowledge transfer.

Thanks to the criterion “flexibility - rigidity of skills” it became possible to determine whether the future social worker is able to select correctly and apply technologies and methods appropriate to the problem of the client of the street social work of the client, and promptly correct them in accordance with the results. Indicators of the criterion "flexibility - rigidity of skills" were chosen the following : the ability to adapt, accommodate to the situation; skill compliance with official duties.

The criterion “sustainability - instability of the manifestation of professionally important and personal qualities” testified to the manifestation and activation of the necessary professional qualities of students that affect the ability to see the prospects for professional development; programming and forecasting the impact on the objects of social work of all social institutions of society. Thus, the indicators of this criterion were the following: stability of manifestation and activisation of qualities.

According to each criterion, the levels of formation of functional competence of further social workers on the street social work were defined and characterized: sufficient, average, low.

Thus, a *sufficient level* of functional competence of students is characterized by the awareness of the importance of knowledge on the street social work; modern theories of related sciences; technologies and methods of a social work, its ethics and legal framework; keeping records. Future social workers with a sufficient level of development of functional competence on the street social work can quickly apply the knowledge gained in practice, transfer them from one situation of the street social work to others, successfully conduct various cases of clients. They successfully establish contacts and exchange information with clients of the street social work, colleagues, interdisciplinary groups, authorities, etc.; cooperate with various specialists to solve problems of clients, as well as social, pedagogical, ethical problems of the society as a whole; select appropriate technologies and methods of a social work in accordance with the category of clients and their situations; collect and analyze information for a full assessment of the situation of the client; develop an individual customer care plan and social diagnosis taking into account the risk of

recurrence; keep working records, prepare reports, letters; evaluate the achieved results, adjust the further work with the client. During their activity, they adhere to regulations, rules and agreements defining general requirements for a social work. The skills of students whose functional competence on the street social work has been formed at a sufficient level correspond to the norms of official duties, and their manifestation does not depend on the complexity of the client's problem. They are tuned to continuous self-development, their personal and professionally important qualities (politeness, emotional balance, observation, unselfishness, responsibility) are stable and active, and it contributes to the successful implementation of professional functions.

The average level of functional competence of students is characterized by their superficial or partial awareness of the importance of basic knowledge of the street social work; modern theories of related sciences; technologies and methods of social work; ethics and legal framework of social work. They do not always quickly apply their knowledge in practice, transfer it from one situation of the street social work to another; establish contacts and exchange information with clients of the street social work, colleagues, interdisciplinary groups, authority, which leads to individual mistakes in the process of performing professional functions. They are not always able to select appropriate technologies and methods of a social work in accordance with the category of clients and their cases; they have difficulties in managing several cases of different clients of the street social work simultaneously. The collection and analysis of information necessary for a full assessment of a client's situation, the development of an individual plan of client assistance and the establishment of a social diagnosis are not always systematic, taking into account the calculation of the risk of recurrence. The skills of future social workers with an average level of development of functional competence on the street social work correspond to the norms of official duties, but their manifestation usually depends on the complexity of the client's problem. Their personal and professionally important qualities are not always stable and active.

The low level of functional competence of students is characterized by the lack of awareness of the importance of basic knowledge of the street social work. They are not able to quickly apply their knowledge in practice, transfer them from one situation of the street social work to others, do not always adhere to moral standards, ethics and the legal framework of a social work. They do not know how to select technologies and methods of a social work, they do not always cooperate with various specialists to solve the problems of clients of the street social work. Usually they do not evaluate the achieved results and do not correct further work with the client; do not have the skills of psychological consultation. Therefore, their skills do not always correspond to the norms of official duties, and their manifestation depends primarily on the complexity of the client's problem. Professionally important qualities of future social workers, whose functional competence on the street social work has a low level of development, are usually inactive and are unstable: when

rendering assistance to the client, they may be not polite, emotionally unbalanced, and not observant, irresponsible.

Diagnosing the levels of formation of functional competence of future social workers on the street social work was carried out according to a specially developed methodology, which allowed revealing the manifestation of indicators of each of these criteria separately and the functional competence as a whole. Thus, to diagnose the knowledge and skills provided by the functional competence of future social workers for the street social work, an appropriate test was developed, containing four blocks, each of which corresponded to a specific competence of students: technological, interdisciplinary, interactive and success competence. Each informative block contained a case (a situational task) aimed at the development of an action program in accordance with the situation. A number of approved methods were used to diagnose professionally important and personal qualities provided by the functional competence of future social workers on the street social work, such as : "Diagnostics of interpersonal relations" (T. Liri, G. Leforge, R. Sazek), "16 RF - "(R. Cattell questionnaire)," Estimation of the level of sociability "(V. Ryakhovsky)," Diagnostics of the orientation of the personality of B. Bass "(V. Smekal, M. Kucher).

Application of the mathematical apparatus allowed us to reveal the general level of formation of the functional competence of future social workers on the street social work with known levels of formation of individual indicators. Thus, at the final stage of the experiment, a sufficient level of functional competence of the street social work was detected in 7 (2.5%) future social workers, the average - in 64 (22.86%), and low - in 209 (74.64%).

For the implementation of the pedagogical experiment, we conducted a distribution of students in the experimental and control groups. Students of each HEIs - base experiment (Odessa National Polytechnic University, National University "Lviv Polytechnic", Chernivtsi National University named after Yuri Fedkovich), who attended the optional special course "The street social work: theory and practice", were classified as experimental, and all the rest became the members of the control group. So, the experimental group included 142 people, the control group included 138 people (the total number of students participating in the experiment was 280 people).

Statistical analysis of the results of diagnostics using the Wilcoxon-Mann-Whitney criterion showed that the students of the CG and the EG lack a statistically significant difference in the formation of the functional competence of the street social work in the ascertaining stage of the experiment.

3. The essence of the pedagogical experiment on the formation of the functional competence of future social workers on the street social work. The realization of the pedagogical experiment included the implementation of special pedagogical conditions into the process of training future social workers. *We regard the pedagogical conditions for the formation of functional competence of future social workers* on the street social work as a

combination of external and internal circumstances, the introduction of which into the process of training future social workers ensures the effective formation of their knowledge and skills necessary for performing the functions of the street social work.

The pedagogical conditions for the formation of the functional competence of forthcoming social workers in the street social work in the investigation were the following : facilitation support for the professional training of students for the street social work; organization of professional training of students for the street social work on the basis of interaction; the acquisition of practical experience of the street social work by students; motivating students to carry out the street social work based on ethical principles.

The introduction of these pedagogical conditions was carried out gradually. Thus, *the theoretical and methodological stage* of the formation of the functional competence of forthcoming social workers for the street social work was aimed at acquiring by students knowledge of a social work as a professional activity, the essence and specifics of the street social work and its clients, the function of the street social work, etc. The theoretical knowledge acquired by students at this stage became the foundation for their mastering the skills necessary for successful solvation of the problems of the street social work clients. This stage included the implementation of such pedagogical conditions as: facilitation support of students training for the street social work, organization of students professional training for the street social work based on interaction and motivation of students to carry out the street social work on ethical principles. At this stage, the formation of technological competence of forthcoming social workers took place , namely: knowledge of the ethics of a social work, the theory and practice of a social work in general and the street social work in particular, their technologies and methods; skills to select appropriate technologies and methods of a social work in accordance with the categories of clients and their situations, as well as such qualities as the desire to help, unselfishness, morality and responsibility.

The theoretical and practical stage of the formation of the functional competence of forthcoming social workers on a the street social work included a detailed study by students of certain theoretical positions of the street social work and modern related sciences, since the social worker needs to cooperate with various specialists (psychologists, police, lawyers , employees of various funds, medical workers, remedial teachers ,disability specialists, , representatives of public organizations, volunteers, etc.), as well as the formation of their practical skills of the street social work. So, at this stage, students received practical skills in applying their knowledge of the street social work. This stage was characterized by the implementation of the following pedagogical conditions, such as: acquisition of practical experience of the street social work and motivating students to carry out the street social work on ethical principles. At this stage, the formation of the interdisciplinary competence of forthcoming social workers took place, namely: knowledge of the basics of general, social, age, legal psychology and socio-psychological and socio-pedagogical diagnosis; skills to take into account the peculiarities of cognitive processes, mental states and

properties of the human psyche and to analyze the patterns of their behavior and activities; such qualities as emotional balance, endurance, observation, and the like.

The professional-communicative stage of the formation of the functional competence of forthcoming social workers for the street social work was intended to teach students to apply the knowledge and skills obtained at the previous stages in the process of direct communication and the exchange of necessary information, since social workers should establish contacts with clients and colleagues , act even in the case of a lack of agreement, coordinate the goals and tasks of the street social work, resolve conflicts constructively , to conduct promotional activities, etc. So, at this stage, there was the consolidation of acquired knowledge of the street social work, the skills and abilities of its conduct, as well as the development of personal and professionally important qualities necessary for this. This phase included the implementation of such pedagogical conditions as: facilitating support for students professional training to perform the functions of the street social work, motivating students to carry out the street social work on ethical principles, and organizing students professional training for the street social work on the basis of interaction. At this stage, the formation of interactive competence of further social workers took place, in particular: knowledge of the basics of constructive communication, techniques of verbal and non-verbal communication, theoretical foundations of supervision, rules of teamwork; interpersonal skills with clients and colleagues, as well as such qualities as interpersonal skills, visual appeal, distribution and switching attention.

The functional stage of the formation of the functional competence of future social workers for the street social work was due to the acquisition by students of the skills of obtaining new knowledge, the use of technologies, methods and experience of the social work in general and the street social work in particular, as well as planning their professional development and self-control in their professional activities. This stage envisaged the implementation of such pedagogical conditions as: facilitation support for the training of students to perform the functions of the street social work, motivating students to carry out the street social work on ethical principles and gaining practical experience of the street social work. At this stage, the formation of the competence of success occurred, namely: knowledge of their strengths and weaknesses, the basics of management and self-management, characteristics of the image of a social worker; skills to set personal goals, independently and responsibly make decisions on solving professional problems, as well as such qualities as dedication, perseverance, efficiency, creative approach to the performance of functional duties.

Such a sequence of stages in the formation of the functional competence of future social workers in the street social work was due to the multifunctional professional activity of the street social worker, which requires appropriate professional knowledge, skills, habits and important personal qualities necessary for the successful implementation of the functions of the street social work in the area of responsibility.

Note that each of these specified stages was forwarded primarily to the formation of students relevant competence (technological, interactive, interdisciplinary, success competence, etc.), but cannot be considered separately from other stages, just as cannot be considered separately other structural components of the functional competence of students for the street social work.

As you can see, each previous stage of the formation of functional competence of future social workers on the street social work provided the possibility of moving to the next stage, provided for the implementation of certain pedagogical conditions and was associated with specific competences related to the structure of the investigated competence.

The implementation of the pedagogical conditions for the formation of the functional competence of future social workers in the street social work was carried out by introducing into the process of professional training of future social workers a special specifically tailored course "The street social work: theory and practice" (provided for 4 credits of study time). The basic tasks of the special course were the following: to highlight the theoretical foundations of the street social work in Ukraine and abroad; to reveal the essence and specifics of the street social work; to determine the functions of a social worker when working on the street; to familiarize students with the basic methods, forms, technologies and techniques of the street social work; to develop a submission of the holistic image of a street social worker, his functional competence; to acquaint students with social organizations with which street social workers cooperate.

As a result of studying the special course, students received:

- *the knowledge* of the theory and practice of the street social work, in particular its technologies and methods; specificities of assistance for clients of the street social work; knowledge of the image of the street social worker and the like.

- *the ability* to comply with the ethical norms of social work in the process of performing professional functions; to select appropriate technologies and methods of the street social work in accordance with the category of clients and their situations; to collect and analyze information to fully appreciate the situation of the client, to develop an individual plan for helping the client, to evaluate the results achieved and correct further work with the client; to keep working records, prepare reports, letters; to comply with legislation , regulations and agreements that define the general requirements for social work; to work under the supervision of a manager or a more experienced colleague; to cooperate with colleagues, interdisciplinary groups using appropriate professional terminology, power; to possess a consulting technology for solving various social and psychological problems of clients and the like.

In addition, the special course "The Street Social Work: Theory and Practice" was aimed at developing among students such *qualities* as: kindness, love for people, desire to help, responsiveness, a feeling of empathy and mercy, selflessness, honesty, decency, morality, responsibility; communication, politeness; visual appeal; distribution and

switching of attention, its concentration; emotional balance, endurance, attentiveness, observation, perception, optimism; responsibility, dedication, perseverance, efficiency, ability to learn, a creative approach to performing functional duties.

Lectures on the special course were conducted using such traditional types of lectures as introductory (on the topic: “Genesis and Development of the Street Social Work”), informational (on the topics: “Methodology of the Street Social Work”, “Functional Aspect of the Street Social Work”, “Sociological Methods of the Street Social Work“, ”Socio-Pedagogical Methods of the Street Social Work”) and concluding (on the topic: “Socio-Pedagogical and Socio-Psychological Support for Clients of the Street Social Work”), and also nontraditional - binary (on the topics “Peculiarities of the Street Social Work in the Sphere of Healthcare, Education and Culture”, “Models of Social Protection of the Population in the Context of the Street Social Work”), problematic (on the topics: “Social and Psychological Methods of the Street Social Work”, “Social and Legal Activities of a Street Cocial Worker”, “Individual Street Social Work”, ”Principles and Norms of the Street Social Work”), lectures and conferences (on the topics: ”Clients of the Street Social Work”, “Individual Street Social work”), and others.

At lectures and practical parts of the special course, such teaching methods as Case-Study, business games (“Organization of training for the street social work”, “6 hats”, etc.), training exercises (“Active Listening”, “I-Messages " etc.) and motivational exercises (“Guide to Others”,“Image of the Street Social Worker ”,“Three Qualities”,“Intelligent Protection”, etc.) were widely used. Thus, the use of Case-Study, allowed to teach students to handle with the unique and atypical situations inherent in real street social work, to develop decision-making skills in them. Business games included the interaction and communication of students among themselves as part of the implementation of defined roles and were aimed to develop their ability to interact. The training exercises were aimed at: support and creation of group dynamics; mutual support and feedback - the expression and understanding of feelings in the process of communication, interpersonal positions in communication; normative and value development of the group; active listening and I-Message; joint decision making; persuasive behavior, the development of students' skills of their position argumentation and the like. Motivational exercises increased the self-esteem of future social workers, stimulated their work on themselves, prompted them to achieve professional success.

Independent work on the special course included various creative tasks: compilation of a brief vocabulary- directory for the street social workers; preparing a discussion on a defined topic; preparation and holding on social events, students' scientific conferences; conducting a questionnaire or survey; making reference notes on the topic; conducting scientific observation; preparation and holding on mini-lectures; drawing up a list of documents regulating the activities of a street social worker, etc.

The results of diagnosis at the final stage of the experiment showed positive changes in the formation of the inspected competence of students who participated in the formative experiment. Statistical processing of the obtained quantitative results of the assessment of the levels of formation of the researched functional competence showed their statistical significance. A comparative analysis of the levels of development of the functional competence of future social workers in the street social work in the experimental and control groups at the ascertain and control stages of the experiment is presented in Table. 1.

Table. 1

A comparative analysis of the levels of development of the functional competence of future social workers in the street social work in the experimental and control groups at the ascertain and control stages of the experiment (in %) .

Levels of functional competence	Experimental group		Control group	
	Ascertaining snapshot	**Final snapshot**	**Ascertaining snapshot**	**Final snapshot**
Sufficient	2,82	46,48	2,18	8,70
Average	23,24	44,37	22,46	26,81
Low	73,94	9,15	75,36	64,49

The results showed a significant increase in the number of students with sufficient and average levels of formation of functional competence of the street social work in the experimental group as compared to the control. The dynamics of the level of formation of the functional competence of future social workers on the street social work in the experimental group for a sufficient level is + 43.66%; for an average level is + 21.13%; for a low level is -64.79%.

The number of future social workers increased in the experimental group . This fact shows that they have got deep and solid knowledge on the street social work, modern theories of related sciences, technologies and methods of social work, its ethics and legal framework; the ability to apply acquired knowledge in accordance with the category of clients and their situation. Their personal and professionally important qualities are manifested stably and actively, that contributes to the successful performance of the functions of the street social work. Similar positive changes were not recorded in the control group . The dynamics of the high level of development of the functional competence of future social workers for the street social work amounted to + 6.52%; the average level to + 4.35% and the low level to -10.87%.

To clarify the differences between the indicators in the experimental and control groups on the levels of formation of the functional competence of future social workers for the street social work, the Wilcoxon-Mann-Whitney test was used. At the ascertaining stage of the experiment, a statistical analysis of the results of diagnostics (with the application of this criterion) showed that the students in the experimental and control groups did not have a statistically significant difference in its formation.

Statistical processing of the received quantitative results of the assessment of the level of formation of functional competence of students in the street social work after the formative experiment showed the statistical significance of positive changes in its formation among students of the the experimental groups. The results showed the effectiveness of pedagogical conditions and the achievement of the goal of a pedagogical experiment.

Conclusions.

The pedagogical experiment on the formation of functional social competence in the street social work for future social workers was carried out within the framework of the research work of the Department of Psychology and Social Work of Odessa National Polytechnic University "Theoretical and methodological foundations of professional training of future social workers at the HEI" (№ 0113U001461).

The theoretical basis of the conducted pedagogical experiment was the definition of such core research concepts as: “the street social work”, “a street social worker”, “a client of the street social work”, “functional competence of the future social worker on the street social work”, “pedagogical conditions of formation in future social workers of the functional competence of the street social work”. The development of the criterion apparatus, the appropriate methodology of diagnosing the levels of formation of the functional competence of students for the street social work, made it possible to identify the state of their professional training for such work at the beginning and in the end of the pedagogical experiment. The practical implementation of the pedagogical conditions for the formation of functional competence of students on the street social work took place in the framework of a specially designed special course “Social Work: Theory and Practice” using the latest teaching methods for future social workers. Diagnostics at the final stage of the experiment showed that the number of students with a sufficient level of functional competence on the street social work in the experimental group increased from 2.82% to 46.48%; in the control group, from 2.18% to 8.70%, and that confirmed the effectiveness of the imposed pedagogical conditions.

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RESEARCH OF PROFESSIONAL SELF-DETERMINATION AND ADAPTATION OF YOUNG TEACHERS

Abstract. *Some aspects of the professional preparedness of young teachers for professional and pedagogical activity are considered in the article. The psychological analysis of vocational pedagogical activity of young teachers is carried out. A productive way of developing the ability to solve pedagogical problems can be the reflexive teaching of young teachers, which ensures the study of the fundamentals of the design of specific pedagogical decisions; active interaction of beginners in the process of finding productive pedagogical decisions is organized.*

Introduction.

The fundamental socio-political changes, the actualization of issues of state building and spiritual revival of the nation, the transition to new forms of economic life put forward the problem of preparing teachers for productive professional activities in modern circumstances. A special role in this process is played by the stage of professional formation of young teachers, when graduates of pedagogical educational institutions become subjects of a new activity for them. The first independent steps of young teachers - past students, show that the real practical professional activity is much different from the teaching practice, and professional training - a thing much more complicated than good grades in the diploma. It can be assumed, according to the essence of the stage of professional development, that the leading psychological tendency of a person who acquires a profession is the tendency for self-assertion in the system of new relationships for oneself. The external contradiction of this stage manifests itself at the personal level as the contradiction between the new status and its awareness by the young teacher.

The objective status of a young teachers changes in the system of their relations with other people. The main activities of the students were educational, and even pedagogical practice had for them primarily the content of educational activities. Everything becomes quite different when it comes to a young teacher.

He already has to organize and regulate the activities of pupils, that is, becomes the subject of a new for him, vocational and pedagogical activities. It is clear that it takes some time for the young teacher to practically master his new functions, to establish relationships with his students, with his colleagues, with the school leadership, to adapt, etc. At the same time, the principle is that the teacher has no right to be a beginner: being a subject of vocational and pedagogical activity, he is forced to make independent decisions and bear the responsibility for them - responsibility not only for himself, but for his pupils as well.

Such a change in the main type of activity is always accompanied by a rethinking of conventional stereotypes and beliefs. The prevalence among headmasters and among the young teachers is that the difficulties of graduates of the pedagogical educational establishments are due primarily to their lack of practical skills and abilities - they can not hold a conversation, write a description, fill a class-book, and so on. Of course, this has a certain meaning, but it is believed that the real causes of the difficulties lie deeper - in the need to find an adequate line of behavior as a teacher, in understanding the essence and content of pedagogical phenomena and facts.

Without a response to the latter fundamental methodological questions, the young teacher is forced to act by trial and error, intuitively or by analogy with the actions of other teachers. As a result, his pedagogical actions are often situational in character, which in turn often leads to the fact that the novice is difficult to adapt, begins to operate in his practice only a narrow set of proven pedagogical methods and communicative skills on his own experience.

The *aim* of the study was to reveal the main specific factors of the socio-psychological nature that affect the process of professional self-determination and adaptation of young teachers.

1. The bulk of the work.

1.1. The level of formation of the ability to solve pedagogical tasks of the young teachers.

Among the urgent problems of vocational and pedagogical activity of the teacher-beginner the most important are the problems of adaptation to the new social environment, which is the school with its pedagogical and student communities. The variety of psychological interconnections and transitions and, in particular, the specificity of the activity of the young teacher is precisely that it is based on the type of communication, that is, interaction and communication primarily in the system of "teacher-students", since the communicative side of vocational and pedagogical activity is the basis of professional activity. Of course, such communication is not symmetrical in its nature. The teacher is not only a participant, but is also, first of all, the organizer of such interaction; he defines the goals, content and forms of communication. That is, it is about the management of the teacher's interpersonal interaction in the system "I and the pupils" in the pedagogical process. It is important to emphasize one more circumstance.

Effective solving of the tasks facing the school today is possible only with the qualitative professional adaptation of the young teacher to school activity, which is the key to his further professional self-determination.

It is very important to adapt the young teacher's personal and professional levels to the process of self-control - productive, reflexive management, which consists in the fact that the teacher has to put himself and the pupil in the position of the active subject of his own activity, carried out in the general system of collective work. One should develop opportunities for oneself and students to self-government, self-regulation, self-organization and self-control by their own activities; to organize the learning process as the solution of educational and cognitive problems on the basis of creative interaction and dialogue with pupils.

Of course, without a successful adaptation to the educational space of the school the young teacher will not succeed. In accordance with the widespread concept of Kuzmina N., Kan-Kalik V., Nikandrov M., Slastonin V. et al. we will consider professional and pedagogical activity as a continuous process of young teacher's solving of an infinite number of pedagogical tasks aimed at achieving the common goal - the formation of the pupil's personality, his outlook, beliefs, consciousness, and behavior.

This problem is studied by us through the prism of the main thematic line - the study of adaptation and professional self-determination of young teachers.

In the works of the mentioned authors, the problem of self-determination of the individual as a solution to the pedagogical problems of a young teacher is analyzed in detail. It is noted, in particular, that the pedagogical problem arises every time when it is necessary to transfer pupils from one state to another: to involve them in certain knowledge, to form abilities, skills or to transform one system of knowledge, abilities and skills, incorrectly formed, into another. The multi-valued nature of solving pedagogical tasks is emphasized. If the pedagogical situation is unambiguous, that is, it does not require the search for an optimal solution, then it ceases to be a task. Pedagogical problem, for example, according to Kuzmina, arises even when a novice teacher himself determines the degree of ability or the inability of his own professional adaptation to the realities of the school educational process.

As the theoretical analysis of scientific literature shows [2; 4; 5; 7; 9; 12; 14; 16], professional-pedagogical activity is characterized by specificity, situationality, integrity, which requires from the teacher not only the mastery of certain scientific and theoretical knowledge, but also the use of the latter in pedagogical practice, creative reflection, transformation into constructive and methodical schemes for the adoption of pedagogical solutions. Therefore, the effectiveness of the professional formation of young teachers can be judged, above all, on how successfully they will cope with solving pedagogical tasks.

In this approach, the assessment of the effectiveness of the professional formation of a young teacher is associated with the allocation of certain types of vocational and pedagogical activities, which are reflected in the corresponding types of pedagogical tasks.

We note that the expediency of using pedagogical tasks to provide operational feedback in the process of teacher training has been repeatedly indicated in domestic and foreign scientific literature [1; 2; 3; 4; 13; 15].

In accordance with the above-mentioned stages of solving the pedagogical problem, it is possible to conditionally distinguish such qualitatively peculiar aspects of vocational and pedagogical activity, the evaluation of which is expedient to carry out separately:

1. Analysis - study and characteristics on the basis of existing psychological and pedagogical knowledge of the individual pupil, a group of children, educational process, the conditions of pedagogical activity.

2. Planning - setting goals, designing and constructing content, tools, forms and methods of teaching activities.

3. Realization - realization of the planned pedagogical activity, that is, pedagogical interaction.

4. Self-analysis - pedagogical reflection, aimed at improving their activities, on professional self-education.

The development of pedagogical analysis of beginners can be judged by their successfully completed tasks dealing with the analysis of pedagogical facts and phenomena, the solution of analytical tasks. Professionally necessary minimum of such tasks will be: defining the nature of pedagogical situations; defining the tasks of pedagogical interaction and its general perspective goal; allocating the factors influencing pedagogical interaction; evaluating the actions carried out by the teacher and their consequences; correlating their observations and conclusions with available psychological and pedagogical knowledge. In essence, we are talking about the development of a holistic vision of a real pedagogical process.

The mastering of planning can be judged by the successful implementation of such tasks by young teachers: the definition of the overall goal and specific tasks of pedagogical interaction; designing the methods and foresighting possible difficulties; designing options for pedagogical interaction. We note that the necessary prerequisite for the successful solution of such tasks is an effective prior pedagogical analysis of the conditions in which future pedagogical interaction will be carried out, and such planning can be carried out both on the basis of an analysis of conditions presented in a pre-recorded form and on the basis of observations of directly carried out pedagogical activity.

The development of the stage of realization can be judged by the successful completion of tasks for the implementation of pedagogical interaction both in the modeled, and in real conditions of pedagogical activity. A prerequisite for this is the successful analysis and planning of pedagogical interaction. This will significantly improve the process of personal and professional adaptation to the school and staff.

In the course of self-analysis, young teachers have to compare planned and actual actions, evaluate their pedagogical expediency, compare the pedagogical situation with other similar and different situations, to identify the factors that influenced the achievement of the goal, to outline and evaluate other potentially feasible ways of implementing pedagogical interaction, to make constructive conclusions for professional self-education and further pedagogical activity. Let's note some fundamental, in our opinion, circumstances:

1. The readiness of teachers to solve pedagogical problems should be based on the fact, that both practical experience and theoretical analysis indicate the inefficiency of using standardized test methods for this purpose. Foreign scientists draw similar conclusions, suggesting ways to evaluate the activities of the teacher, based on expert judgments with specific benchmarks, which would be marked by a certain school environment and a university that is engaged in training teachers. At the heart of the proposed approach lies a meaningful, qualitative assessment of the effectiveness of the professional formation of young teachers according to the given parameters; the formalization of the results of such assessment with a view to their further mathematical processing is, in principle, secondary.

2. In the proposed approach, there is no direct focus on the identification and evaluation of the personal qualities of young teachers; the latter are evaluated in the abstract, but not so much in terms of verbal constructions, but because of their adequate or inappropriate concrete expression, including value orientations, affective-personality manifestations in the style of pedagogical communication.

3. There must be a pronounced corrective character, when the diagnosis of certain difficulties and contradictions in the process of professional formation of young teachers is a prerequisite for conducting the corrective work.

In the framework of the described approach, the assessment of the readiness of young teachers to solve pedagogical problems should be based on a generalization of expert judgments. The administration of schools, employees of methodicals were in the role of experts. The results of the evaluation were expressed in points; the numerical values corresponded to the developed gradation of the levels of preparedness of young teachers. The last quantitative values respectively were attributed: 0 - zero; 1 - low; 2 - medium; 3 - high.

Zero level - the actions of the teacher do not have the necessary justification or are based on erroneous conclusions from the previous pedagogical analysis; pedagogical activity as a whole does not satisfy the requirements arising from the principles of education and upbringing; the actions of the teacher, his behavior as a whole is unconscious.

The low level - the actions of the young teacher are only partially justified, significant errors are made in the conclusions from the previous pedagogical analysis, pedagogical activity only partially satisfies the requirements of the principles of education; actions and behavior are only partly realized, with significant omissions in understanding the goals, the ratio of planned and achieved results, etc .;

The average level - the actions of the young teacher as a whole are based on the results of the previous pedagogical analysis; pedagogical activity as a whole meets the requirements of the principles of education and upbringing; actions and behavior are generally understood; the planned activity is carried out in a timely manner or with insignificant deviations from the terms; a significant degree of independence appears.

The high level - the actions of the young teacher are fully justified by the results of the previous pedagogical analysis; the activity fully meets the requirements of the principles of education and upbringing; actions are fully realized, including the ratio of goals and real results, a critical evaluation of their own behavior, etc .; a high level of independence appears: the planned activities are carried out in a timely manner.

Problems of adaptation and professional self-determination of young teachers require an empirical study at the level of an established experiment.

1.2. Empirical study of the preparedness of young teachers to solving pedagogical problems as a component of professional self-determination

For the purpose of scientific study of the problems of adaptation and professional self-determination of young teachers, during the years 2014-2017 a number of empirical studies were carried out. Psychological and pedagogical research covered 30 young teachers of secondary schools of Zakarpattia Oblast of Ukraine, whose professional activity was assessed by experts. Table 1 summarizes the results of expert assessments.

Table 1.

Preparedness of young teachers to solve pedagogical tasks (according to expert assessments)

Teacher's groups (by work experience)	Levels of preparedness			
	The high level	The average level	The low level	Zero level
Up to 1 year of work	10,0	25,0	40,0	25.0
From 1 to 3 years of work	16,7	26,7	33,3	23,3
From 3 to 5 years of work	20,0	25,0	40,0	15,0
Total	15,7	25,7	37,1	21,5

It follows from the results (let us remind you that it is about experts' assessment):

1. The number of young teachers with a high and average levels of preparedness to solve pedagogical tasks rises from 35.0% in a group with a work experience of up to 1 year to 45.0% in a group with a work experience of 3 to 5 years of work. This can be interpreted as a consequence of the adaptation of young teachers to a professional role, their self-education and methodological and advisory assistance from methodological services, school

administration and more experienced colleagues. It should also be borne in mind that the fact that the given data, especially for teachers with a work experience of up to 1 year, are somewhat idealized, they express how further analysis will be not so much real but desirable.

2. A very large number of young teachers with a low and zero level of preparedness to solve pedagogical problems - 65.0% in a group with up to 1 year of experience and 55.0% in a group with experience from 3 to 5 years. As you can see, there is a positive dynamics depending on work experience, but it is very small and obviously can not meet the requirements of school practice.

In essence, we are talking about the fact that the reasoning is based on understanding the results of interviews with young teachers and experts, during which they found out the following problems:

– Are the beginners guided in their practical activities on a particular psychological and pedagogical concept of education, and which one exactly?

– If their practical activity does not come from a single psychological and pedagogical concept, then which psychological and pedagogical laws are implemented in separate aspects of the activity?

– What aspects of the pupil's mental development young teachers are focused on in their practical activities, which mental functions primarily seek to develop at a particular lesson?

– What kind of thinking do they try to develop in their students, which attitudes to the surrounding reality should one educate?

– How, to what extent and in what directions is the formation of personal qualities of students is carried out?

Pedagogical activity can be carried out by a teacher at the empirical and conscious levels.

The empirical level is associated with mastering only the external, substantive side of pedagogical activity, when young teachers determine the way of action based on the logic of practical action. At the same time, the fact that the logic of practical actions does not reveal the regular connections between the individual components of the pedagogical process is missed out, which is the competence of the theory. As a result, young teachers often can not, and do not see it necessary to justify what methods of action and why they chose in this situation. They simply copy the actions of other teachers or blindly perform methodological advice.

The conscious level assumes that the external subject activity is preceded by the internal and theoretical activities, that is, the comprehension of objectives, expected results, planned actions, conditions of their implementation is carried out. In confirmation of the above we refer to the arguments of Leontiev. A conscious action, he emphasizes, is a process subordinated to a conscious goal, which leads to the predicted result [14].

In our case, there is often a discrepancy between the processes of young teachers' mastering of theoretical knowledge and the accumulation of their practical experience. These processes coexist as if they were in parallel, do not overlap, without causing the formation of theoretically substantiated constructive schemes for solving pedagogical problems, at least for those young teachers whose readiness to solve pedagogical problems is at low or zero levels.

In parallel, we analyzed the difficulties faced by young teachers at the stage of entering the pedagogical profession. First of all, through a non-standardized interview, young and experienced teachers and school administration were interviewed, the nature and content of such difficulties were clarified. The information received was systematized in the form of a special questionnaire, which was proposed to an experimental group of young teachers in the number of 30 people. Before them the task was to rank the importance of the identified difficulties. The processing of the results envisaged the definition of the average arithmetic rank of each difficulty and the determination of the indicator and significance in the pedagogical activity of beginners (Table 2).

Table 2.

Difficulties of young teachers at the stage of entering the pedagogical a profession

List of difficulties	Average arithmetic rank	Ranking place
– Inability to keep students attentive, confident in their abilities, and honest attitude to learning.	1,89	I
– Failure to distribute your attention to the lesson.	2,22	
– Inability to use the influence of the class, the group of students on the personality, the orientation to "pair pedagogy".	2,28	
– Lack of ability to understand the students, understand the motives of their actions, behavior in general.	2,33	II
– Failure to heed criticism.	2,39	IV
– Inability to control oneself, unbalance.	2,56	
– Lack of ability to persuade students.	2,72	
– Failure to maintain discipline in the classroom.	2,83	V
– Inability to efficiently organize their activities.	3,06	
– Inability to efficiently organize class activities.	3,17	
– Inability to intensify pupils' cognitive activity.	3,28	
– Some personal qualities (unwillingness, soft nature, etc.).	3,29	
– Insufficient methodological preparedness.	3,56	
– Gaps in theoretical knowledge.	3,72	
– Some personality features (insufficient fairness and objectivity, difficulties in the communicative system, etc.).	3,78	
– Inability to educate children in a classroom.	3,94	
– Randomness of a choice of a profession, absence of necessary motivation.	4,11	VI

Note that the difference between the arithmetic ranks of the selected difficulties is statistically significant. When comparing ranks of the first and sixth places the criterion of reliability of the difference for the Student is 10,04. Even between the indicators of individual places the difference is statistically significant (for example, between the indicators of the first and second places the criterion of the Student is 2.62, which corresponds to the significance level of 0.01).

Analysis of the data obtained allows to note:

1. In the process of practical development of the pedagogical profession, young teachers face serious problems of external, substantive nature and difficulties caused by personal and psychological causes.

2. Many of the objectively existing problems of the professional development of beginners fall out of the field of view of the school administration and methodological services, which are to provide the necessary assistance to young teachers at the stage of their entering the pedagogical profession (this can be confirmed by the results of interviews with school principals, heads of the training unit, methodists).

3. The difficulties caused by the inability to use theoretical knowledge to solve pedagogical problems are clearly underestimated by young teachers, which can be interpreted in that the professional functions of many of them are carried out at the empirical level, as a result of which the need to justify the method of action and the reasons for its choice in this situation often falls out of the field of their attention.

The next series of studies conducted by us concerned a more in-depth analysis of the peculiarities of the solving of only one type of pedagogical tasks, namely, didactic (psychodidactic) tasks aimed at forming a system of knowledge, abilities, skills, positive stereotypes of activity (actions, operations) or for the correction of such a system.

A psychological analysis of the problems of didactics, a psychodiactic approach to defining basic concepts, in which the content, structure, function, and the form of the learning process are revealed, can be found in a number of studies [3, 6, 8, 10, 11]. The generalization of these and other works allows us to construct a system of concepts, the structure of which reflects the logic of solving a psychodidactic problem by the teacher, and further corrective work. We have developed a system of questions-tasks of a conceptual and causal nature. It was assumed that the answers to these questions should reflect the knowledge of the logic of solving the psychodydactic problem.

It can be explained by the fact that the professional functions of many of them are carried out at the empirical level, so that the necessity of justifying the mode of action and the reasons for its choice in this situation often simply falls out of their field of attention.

Diagnosis of knowledge of young teachers about the learning process:

1. What is meant by the learning process?
2. What is teaching activity?
3. What is meant by learning activities?

4. What is a learning situation?
5. What is meant by individual learning situations?
6. What is meant by the task in its most general form?
7. What tasks, above all, are characteristic for the educational process?
8. What is a didactic task?
9. What should be understood under the educational task?
10. What is a learning action?
11. What are the types of learning actions?
12. What is a learning operation?
13. What is a learning asset?
14. Expand the notion of "knowledge".
15. What is a skill?
16. What is an ability?

Diagnosis of knowledge of young teachers about the educational material and methodological support of the learning process:

1. What is meant by normative social knowledge?
2. What is a school textbook?
3. What are the functions of the textbook?
4. What is meant by didactic material?
5. What is included in the didactic material?
6. On the basis of what the assessment (positive - negative) is given?
7. What are the main characteristics of the didactic task?
8. Is it right to speak about the acquisition of didactic material by pupils?
9. What is meant by educational material?
10. What is the main function of the educational material?
11. What is normative content of education?
12. In what sense is the concept of normative content of education used?
13. In what forms does the normative content of education exist?
14. Name the components of the main function of the educational material.
15. What is the way of action?
16. What is meant by a generalized way of action?
17. What are the main characteristics of the generalized way of action?
18. Under what conditions can it be considered that the student formed a generalized way of acting?
19. What is the ratio of the generalized method of action and normative content of training?

Diagnosis of knowledge of young teachers about methodical forms of educational material

1. Give the definition of the teaching method.

2. What does the teaching method determine?

3. How is the teaching method and teaching material correlate?

4. What are the main structural components of the educational material that really exists in the educational situation?

5. How is the methodological form of educational material determined?

6. How can the structural and functional components of the teaching material be presented in the learning situation?

7. Based on the three basic structural and three functional components of the educational material, how much can one distinguish qualitatively peculiar methodical forms of educational material?

8. What methodological form of educational material determines the display of the operating side of the assimilated mode of action through the message?

9. What methodological form of educational material determines the display of the operating side of the assimilated mode of action using the problem method?

10. What methodological form of educational material determines the display (implementation) of the operating side of the assimilated mode of action through communication?

11. What methodological form of educational material determines the presentation of target characteristics of the method of action to be absorbed through the message?

12. What methodological form of educational material determines the presentation of target characteristics of the assimilated way of action with the help of the task, problem method?

13. What methodological form of educational material determines the presentation of target characteristics of the assimilated mode of action through communication?

14. What methodological form of educational material determines the presentation of objective characteristics of the assimilated mode of action through communication?

15. What methodological form of educational material determines the presentation of objective characteristics of the assimilated method of action with the help of problem method, task?

16. What methodological form of educational material determines the presentation of objective characteristics of the assimilated mode of action by the time of communication?

Diagnosis of knowledge of young teachers about types of educational situations:

1. Give reasoned assessment on the criterion of an effective-ineffective linear variant of constructing a learning situation.

2. Give reasoned assessment on the criterion of an effective-ineffective combination of options for constructing a learning situation.

3. Based on the nine basic methodological forms of educational material, name the six optimal typical variants of constructing educational situations.

4. What role in social practice performs a generalized way of action that is formed in the process of studying mathematics, physics, chemistry?

5. What component of this method determines its relationship with social practice?

6. What role in social practice does a generalized way of action that is formed in the process of studying biology?

7. What component of this method determines its relationship with social practice?

8. What role in social practice does a generalized way of action that is formed in the process of studying literature?

9. What component of this method determines its relationship with social practice?

The study covered 30 beginner teachers (the results of expert assessment of their preparedness for solving pedagogical tasks were presented and analyzed above). Special questionnaires were used to gather information, and non-standardized interviews to get deeper into the problems. Responses of the respondents were compared with the standards that reflected the essential features of the phenomena that were described by the relevant concepts. The criteria for evaluating the formation of the categorical, conceptual apparatus of the mental processing of young teachers were: the scope and completeness of knowledge; awareness of knowledge, independence of thinking, evidence of certain principles, etc.; the presence of interest in psychological and pedagogical theory. The main conclusions from the analysis of the collected material are presented below.

In young teachers, the attitude changes both to the profession as a whole and to individual aspects of the pedagogical process. Thus, 63.0% of respondents believe that their previous ideas about the teaching profession do not coincide with real school practice. It is significant that in new assessments the critical 38.0% of the total number of respondents are amplified and the negative 23.0% of the assessment increase. In comparison with the university period, the attractiveness of communication with students decreases, especially informal, and, vice versa, the attractiveness of teaching activity increases to some extent.

It is observed, first of all, during the first three years of work in the school of growing skeptical 22,0% in the group with experience up to 1 year, 38,0% in the group with experience from 1 to 3 years, 40,0% in the group with experience from 3 to 5 years, and often overtly negative, respectively, 18.0%, 36.0% and 35.0% of the ratio to psychological and pedagogical theory.

As shown by the analysis, knowledge of the majority of beginners in the psychological and pedagogical theory are scattered and fragmentary in nature. Among the most significant problems in this regard, note the theoretical knowledge of most beginners to 70.0% in our case, are at the level of disparate positions, without the need to understand the links between them. Some theoretical positions in most cases up to 90.0% are not reduced to certain concepts, do not reach the level of constructive - methodical schemes for the analysis of pedagogical situations and the adoption of pedagogical decisions; almost all beginners face serious difficulties during the operationalization of psychological and pedagogical knowledge. As a result, pedagogical decisions taken by young teachers are not theoretically well-founded, and this, in turn, leads to the fact that beginners carry out their professional functions more often at the empirical level, by trial and error, intuitively or by analogy with actions of others.

At the low level is the young teachers' mastering of the methodology of analysis of pedagogical situations; removing the pedagogical tasks and making theoretically sound decisions. In many cases, up to 85.0% of beginners simply do not see pedagogical tasks in the emerging situations, or they are replaced by their functional or intermediate tasks, focusing all their attention on solving the latter - to give a lesson, to hold an educational event, to use a certain set of methods of influence to the student , etc. One of the weaknesses in the work of young teachers is the inability to determine the goals and objectives of the lesson, the study of a particular topic, subject, etc., the lack of understanding of the importance of this procedure for the effectiveness of the teaching process, the inability to analyze the conducted lessons in accordance with the set goals. For example, the definition of the aim of training often, in 75.0% of cases, is replaced by beginners describing their own actions in studying a particular educational topic ("disclose", "explain", "tell", etc.) or are identified with the content of education.

We should also mention that young teachers face significant difficulties in highlighting what is main in the topic, identifying the main, core ideas of the lesson, implementing a sound choice of system of methods and methods of pedagogical impact on students, organizing joint activities of students and their individual work, both at the lesson and at extra-time, in the implementation of a differentiated approach to students based on their age and individual characteristics.

Conclusion.

The generalization of the presented above material allows us to conclude that the spontaneous process of the young teachers' involvement in professional activities has low efficiency. Thus, according to expert estimates, even in a group with work experience from 3 to 5 years, 55.0% of beginners have low and zero level of preparedness to solve pedagogical tasks, in a group with experience up to 1 year of - 65.0%. The qualitative side one can name the following main trends and problems as the most significant:

- skeptical, and often overtly negative attitude of many young teachers to psychological and pedagogical theory, moreover this tendency is increased depending on the experience;

- distinct, fragmentary character of psychological and pedagogical knowledge, difficulties of beginners in the operationalization of the latter;

- insufficient theoretical justification of the decisions of young teachers; the realization of their professional functions at the empirical level by tial nd error, intuitively or by analogy with the actions of others;

- low level of knowledge of the methodology of analysis of pedagogical situations, the allocation of their pedagogical tasks and the adoption of theoretically sound solutions; in many cases, beginners simply do not see pedagogical tasks in emerging situations or substitute them as functional or intermediate, focusing all their attention on the solution of the latter.

In other words, with the spontaneous development of the functional content of the pedagogical profession, most beginners are disconnected from the processes of accumulation of practical experience and the development of psychological and pedagogical theory, which exist as if in parallel, without causing the formation of theoretically substantiated constructive and methodical schemes for solving pedagogical problems.

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DEVELOPMENT OF FUNCTIONAL PROPERTIES OF GOODS AS A TOOL FOR FORMING THE ENTREPRENEURIAL COMPETENCE OF FUTURE SPECIALISTS

Abstract. *The 21st century economy calls for the initiative, which is based on a high level of business organization culture and intensifies the search for effective options for the goods production and sale. Political and economic transformation of society exacerbates targeting of youth, who gets commodity profession, to the types of engineering activities in food production demanded by market. The article discusses the process of developing of jams functional properties as an instrument of business competency forming of the commodities expert, reveals its essence, economic, technological, social and pedagogical value. It was found that problems of confectionery consumption (based on fruit and berry raw materials) are the subject of scientific research of many national and foreign scientists. However, the issue of developing of jam functional properties as an innovative quasi-professional production and trading activity and as a tool for the formation of entrepreneurial competence of future commodity researchers has not yet become the subject of a detailed study. The research is based on the results of student's laboratory analysis of the quality of nine jam's samples by organoleptic and physic-chemical indicators. The main methods of consumers' preference for jams studying (conducted by future commodity experts): observations, consumer surveys, scales methods, and the construction of a «polarity profile» of competitor products. The result of the research is the created by students formula of strawberry jam with the addition of Jerusalem artichoke syrup, which was recommended for introduction into production. Further scientific researchers are associated with the launch of an assortment line of confectionery products with functional properties as the result of the formation of entrepreneurial competence of future commodities experts.*

Introduction.

Functioning of production and trading structures on the basis of market philosophy of management involves the establishment of stable and effective economic relations. Economy of the XXI century is characterized by the need for taking initiative, which is based on a high level of culture of the business organization and enhances activation of finding effective ways of goods-producing and selling [1]. The transition to the regulated market economy (in the shape of economic reform in Ukraine) sets new requirements for the personality of future members of social production and requires the formation of their willingness to be included in the progressive forms of economic relations based on entrepreneurial world outlook. The political and economic transformation of society exacerbates the problem of orientation of young people (who master commodity science-related specialties), to the types of engineering activities in the field of food production demanded by the market. Future commodity specialists should be able to conduct

innovative engineering activity, the integral parts of which are: to plan and to design new products and to organize their selling in a changing market environment, to be ready to contribute to the engineering processes of food production on the basis of demand study in the trade network.

The development of market relations, the formation of a new ownership structure, the change of traditional management systems, expansion of the sphere of economic independence of market actors make young people to develop their mentality and entrepreneurship culture, which are adequate to these processes, on the basis of skills of new products creating, their implementation into production and emphasizing social significance for society and business [2]. Extremely quick civilization changes in the early twenty-first century put before the higher educational institutions the task of developing a future-oriented thinking, preparing their graduates to perform during their work the tasks they had not previously performed, and applying the knowledge they had not acquired previously, which makes the topic of this publication relevant [3].

This publication is devoted to solving the problem of developing the functional properties of fruit and berry jam, which provided the conditions for the formation of entrepreneurial competence of future commodity researchers.

The purpose of the study was to substantiate the expediency of improving the range of jam by developing assortment positions with functional properties and using the process of developing a formula of fruit and berry jam on the basis of sugar substitute as a tool for forming the entrepreneurial competence of future commodity researchers. The achievement of this goal led to the following tasks: to analyze the technological principles of jam industrial production; to detect and to check experimentally the indicators of jams quality; to separate tendencies of jam consumption and to form a portrait of the consumer of this product; to develop a recipe for strawberry jam with the addition of Jerusalem artichoke syrup; to clarify the definition of «entrepreneurial competence» and to discover the possibility of its formation in the process of developing the formulation of an innovative product with functional properties.

1. The essence of the CDIO training concept and the analysis of the results of its implementation in the process of professional training

In accordance with the tasks of the National Strategy for the Development of Education in Ukraine for 2012-2020, future commodity researchers are required not only to contribute to satisfying the needs of the population in food products, including confectionery products with addition of fruit and berry raw materials, but also to have a wide range of personal and professional competencies that will enable them, through the results of research on demand in the trade network, to solve a socially significant problem of providing the population of the country with goods of a functional purpose by participating in the work of engineering teams which develop innovative food products.

There is an increasing awareness in society, that the use of fruit and vegetable products is an important condition for the normal functioning of the human body. Fruit-and-vegetable products are characterized by high nutritional value due to the high level of vitamins, carbohydrates, pleasant fruit and berry aromas and sour-sweet taste. Their processing provides consumers with confectionery products which are rich in carbohydrate complex and other valuable ingredients that cannot be stored for a long time in fresh [4]. Problems of studying the trends in the development of the fruit and vegetable sub complex of agriculture in Ukraine were reflected in L. Agarkova's works, V. Ulanchuk studied the prospects for the development of the consumer market for fruit and berries, O. Franchuk studied the prospects for the development of the market for fruit and vegetable preservation in Ukraine and the world. O. Maslak researched the issues of development of the fruit and vegetable market. O. Mozgova explored the ways of development of the confectionery market. The directions of increase of profitability of the enterprises of the confectionery industry of Ukraine were formed by I. Polishchuk. E. Kornikovsky investigated the economic factors of influence on the confectionery industry of Ukraine. The results of the analysis of scientific researches and publications, which initiated the solution of this problem, testify to the presence of achievements in identifying innovative aspects of the development of the confectionery market in Ukraine (S. Ermak) and the trends of the development of confectionery market in Ukraine under modern conditions (E. Demyanenko).

The results of the consideration of the content of the concept of «competence» allow us to state that the essence of the concept of «competence» was studied by O. Serebrunnikova and S. Prishchepa. The directions of solving the problem of preparing young people for entrepreneurship in the context of vocational training are the result of scientific researchers conducted by V. Drizhak, D. Zakatnov, S. Melnyk, N. Pasichnyk, N. Pobirchenko, A. Topol. The problem of forming students' competence in the field of entrepreneurship was developed by V. Demidov, I. Revin, D. Tsybulevska, and other researchers.

It should be noticed that the results of the analysis of recent studies and publications prove that the problem of forming the entrepreneurial competence of commodity researchers on the example of studying the directions of expansion of functional properties of food products, including fruit and berry jams was left out of the scientists' attention. At the same time, the consideration of the state and prospects of the development of the jams consumer market without claiming to the fullness of the analysis let us suggest that, despite the relevance of this problem, the development of the functional properties of jam as an innovative quasi-professional production and trading activity and as a tool for forming the entrepreneurial competence of future commodity researchers has not become yet the subject of fundamental researches.

Market – is a set of interests and actions of real and potential buyers and sellers, and the conditions which characterize the state and changes of their interests and actions [5]. An analysis of the retrospective of the life cycle of professional competencies of individuals proves that several decades ago a graduate of the university received a certain set of knowledge and skills for professional activities; he was able to use the necessary tools for conduction of appropriate forms of work and reports presentation. His work and the required competencies have not had changed a lot from the beginning of work and until the retirement (Fig. 1). The market dictates constant changes both to the requirements for the product which is created by a specialist, and to specialist` ability to generate innovations that ensure the success of the product on the market and at the same time ensure specialist` professional growth, identifying the preconditions for the prevalence of a competency approach in professional training. The fig. 2 shows the conditional distribution of the life cycle of competencies in the XXI century: the first stage – training in higher educational institutions, the second – work in the position, designed to confirm the level of competence, the third – the development of new competencies; the fourth – the growth of experience; fifth and sixth – new responsibilities, etc. the seventh – retirement [6]. Taking into account the updating the Curve of the Life Cycle of Competencies at the beginning of the XXI century it is not enough for future commodity scientists to master only the methods of studying the organoleptic and physical and chemical indicators of product quality. Also, such changes have formed the need for future commodity scientists to master by the methods of identifying trends in the consumption of goods and finding directions for expanding their functional properties.

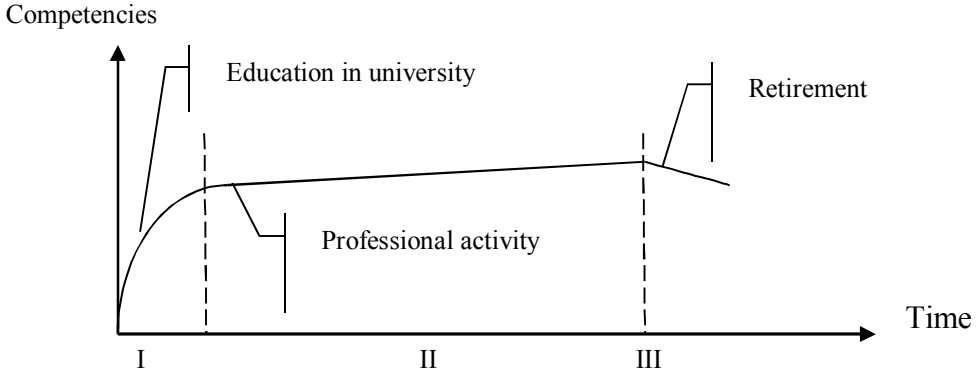

Fig. 1. The Curve of the Life Cycle of Competencies (relevant for 1920-1980). [6]

The updating the Curve of the Life Cycle of Competencies in the late 1960's and early 1970's was marked by an increase in the number of universities with new educational models in the world. In 1968, at the University of McMaster (Canada), in 1972 at Maastricht University (the Netherlands) and in 1978 at Newcastle University (UK), the problem-oriented learning model was first implemented in the field of healthcare. Its implementation in engineering education, social sciences and the humanities sciences was realized in 1972 at Roskilde University (Denmark) and in 1974 at Aalborg University (Denmark) [7].

The general name of this model is the PBL- model or problem-based learning. The model determined competencies as learning outcomes, and it used knowledge and skills in the context of educational disciplines, as a platform for student achievement of specific competencies. The essence of this model – integrated approach based on a combination of practical training of students and their theoretical training, and teachers were considered as intermediaries (consultants) in the process of student learning. In 1998, at the Massachusetts Institute of Technology (USA), it was transformed into a CDIO learning concept («Conceive - Design - Implement – Operate»), which also defined the context of engineering education [8] According to the CDIO concept, the stage of awareness and product planning (Conceiving) involves identifying the needs of the consumer and the possibilities of their satisfaction; the stage of its design (Designing) is devoted to the development of the project; at the stage of implementation (Implementation) the project becomes a product which will be tested by the consumer; the control stage (Operating) means the use (consumption) of the manufactured product to obtain the intended result [9].

Since 2000, the CDIO-training model has been introduced at the Royal Institute of Technology (Sweden), the University of Leeds (United Kingdom), Polytechnic University of Turin (Italy). In the post-Soviet space, the concept of CDIO in vocational training began to be used within the framework of the project «Modernization of higher engineering education in Georgia, Ukraine and Uzbekistan according to technological challenges» of the European Union program TEMPUS.

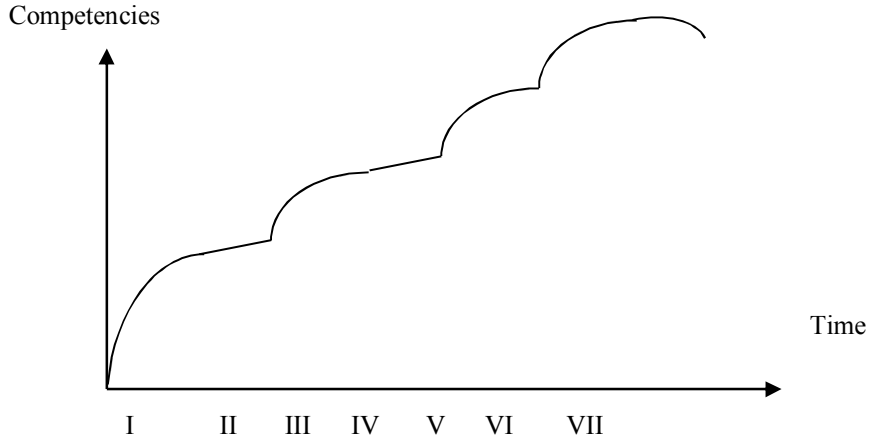

Fig. 2. The Curve of the Life Cycle of Modern Competencies [6]

The implementation of the principle of CDIO in Ukraine is carried out in three stages: 1) the stage of laboratory work (students solve tasks by using real equipment which let to create their motivation); 2) competition within the framework of the University students works contest (the role of each student is specialized, but the experience of working in the team is formed); 3) work in the framework of projects for participation in external competitions of student work (the possibility of applying knowledge and skills in practice). These stages correspond to the practice of CDIO-training of leading universities of the world [10].

In the Kharkov Trade and Economic Institute of KNTEU, the concept of CDIO-training is actively implemented in the process of future commodity researchers training. In addition to the above-mentioned three-stage team work [11], CDIO-education includes individual work in the form of coursework and diploma design. Thus, in the case of diploma design, which became the basis of this study, work was carried out using nine samples of sterilized strawberry and raspberry jams of national and imported production (TM «Bioitalia», TM «Maribel», TM «Tiptree», TM «Premium» , TM «Framboises», TM «Shchebpak», TM «Veres», TM «Emmi», TM «Askania-Pack»), and also a sample of jam which was made according to the improved formulation. Students used standard methods for studying organoleptic and physical and chemical indicators. The study of commodity characteristics of jams was carried out using comparative and measurement methods. Organoleptic parameters were determined at room temperature, in normal light in accordance with DSTU 4900: 2007 «Jam. General specifications». The search for a mass fraction of dry soluble substances was carried out in accordance with GOST 28562-90 «Fruit and Vegetable Processing Products. Refract metric method for determination of soluble solids»; total acidity – by the titer method according to GOST 25555.0-82 «Fruit and Vegetable Processing Products. Method of determination of titrated acid». The detection of trends in the use of jam and the search for directions for expanding their functional properties, which became the tool for forming the entrepreneurial competence of future commodity researchers, was conducted using observation as the main empirical method of research, consumer survey, the application of the scale method and the construction of the «polarity profile» of the competitor products.

According to the concept of CDIO-training, the Integrated Baccalaureate Practicum at the Kharkov Trade and Economic Institute of KNTUU was organized in the form of a training course. In order to its active implementation, a survey of representatives of companies in the region was carried out and a list of required professional competences for future graduates was identified. Set of lectures for master-students was conducted by representatives of the real market structures (for example, lectures on discipline «Organization of management in customs authorities» were conducted by Deputy Chief of Kharkov Customs DFS, the adviser to the Tax and Customs Affairs of the I rank). In the process of vocational training, future commodity researchers were oriented in an auditorious and non-audited way in two directions:

1) commodity evaluation and analysis of the quality of goods according to standard indicators;

2) monitoring of consumer demand and developing on this basis products with functional properties. Let's consider this experience as an example of the work of students on the research of the consumer market of jam in Ukraine.

2. Designing and researching the functional properties of jam as a tool for forming the entrepreneurial competence of the future commodity researcher.

Jam is a product which is obtained from whole or small pieces of fruit, berries and some vegetables boiled down in sugar or sugar-molasses syrup to jelly-like consistency. Raw materials for jam are usually fruits that contain at least 1% of pectin and 1% of organic which let to achieve the gelling effect. The nutritional value of fresh fruits is due to the presence of carbohydrates, organic acids, nitrogen and mineral substances, and vitamins. Some fruits have therapeutic value (raspberry, black currant, grape, blueberry, pomegranate, carrot) because of the content of tannin and pectin substances, phytoncides and antibiotics (Figure 3). The content and the ratio of chemicals which are contained in the raw material influence to the indicators that determine the properties of the jam and its quality (color, taste, smell, consistency, culinary properties) and nutritional value. The results obtained by students at laboratory show that the best raw material for jam production are apples, quince, raspberries and strawberries.

Since the jams are processed fruit and berry products, they store a large number of elements and nutrients present in fresh fruits and berries. The chemical composition of jams includes: water, proteins, fats, carbohydrates, enzymes, vitamins, saturated fatty acids, cholesterol, organic acids, trace elements, dyes and aromatic substances. Jams can contain food additives – E 200 (preservatives that promote their long-term storage); E 400 and E 500 (stabilizers preserving a given consistency of jam); E 1000 (supplements preventing sugar reflux) [12]. High quality jams do not retain the shape of the fruits, since they are completely boiled down. At the same time the jam should not spill over the surface. The nutrient in 100 g of jam is from 186 to 250 kcal.

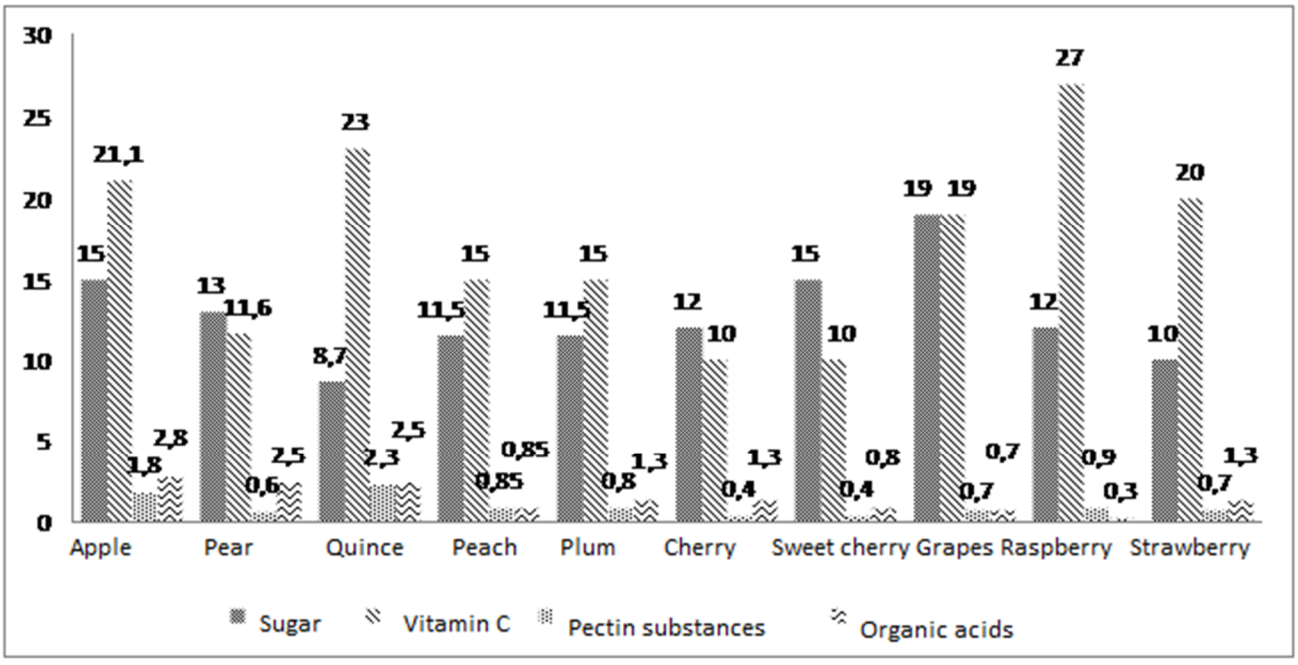

Fig. 3. Comparative characteristic of natural raw materials for jam production, mg

In Ukraine, jam is a less popular product than in the world, but its production is competitive and provided by 74 national enterprises. The main producers are «Veres» group of companies, «Haysin canning plant», PJSC «Mohyliv-Podilskyi canning plant», « Pani Kristina» Company, «Total Ltd», «Saffron Elite» Company, National multiprofile company «Askania-Pak». There are two grades of jams in Ukraine: the highest and the first. They are made with the observance of sanitary rules, according to the technological instruction and recipes in accordance with the requirements of DSTU 4900: 2007 «Jam. General specifications». Their quality is determined by organoleptic and physical and chemical indicators, safety indicators and microbiological indices for non-sterilized jams.

«Haysinsky Tinnery Factory» LLC is a leader in the market of jam: its nomenclature includes the producing of 24 varieties of this product. The company «Pani Kristina» (part of TM «Holiday») creates six tastes of jam, including non-traditional ones for other producers: with pumpkin and apple-pear tastes. PJSC «Mogilev-Podilskyi Tinnery Plant» produces TM «Gifts Lines» of four types: with currant, apricot, cherry and strawberry. TM «Veres» presents three tastes of jam: with peach, strawberry, and apricot. Based on the results of the monitoring of the consumer market of jams students also discovered a new brand on the Ukrainian market «Good Confectionery» from the company «STEVYYASAN CORPORATION», which builds its assortment on the concept «Dissemination of innovations in favor of the common good»: the assortment line consists of seven jams, among which are jams made from blueberries and with use stevia instead of sugar [13].

Almost to 50% of the assortment in the range of analyzed supermarkets of Kharkov are imported jams. They belong to a higher price category than the Ukrainian products; they are unique in design and have an indisputable competitive advantage – a wide variety of flavors because of additives. The main feature of imported jams is the lack of sugar recipes (French «St. Dalfour», Italian «Bioitalia», Greek «Helios», German «SCHNEEKOPPE», British «JimJams» and «Wilkin & Sons»).

Commodity evaluation and analysis of the goods quality according to standard indicators always begins with the identification of cases of quantitative falsification (which means a significant deviation of the goods parameters from the requirements specified by the normative documents) and information falsification (the essence of which is in the presentation of false or inaccurate information about the name of the product, country of origin, composition, address of the manufacturer etc.), which appear in the marking [14]. The analysis of the marking made it possible to conclude that the information on all prototypes is clearly indicated in the Ukrainian language, the elements of the marking are indicated in full, which testifies to its authenticity. All samples have the manufacturer and importer details (country, city, address, telephone), the manufacturer's trademark is present, information about storage conditions, production date and the final date of consumption, batch number, nutritional and food value of the product – all these details are present. At the same time, import jams do not have reference to the normative document, but that is

permissible. Three samples have an extended shelf life (36 months against 24 months specified in standard), which means the probability of adding preservatives. There are no prohibited food applications in the samples of jam (in Ukraine falsified is considered a jam that contains unacceptable food additives – aniline, amaranth, citrus, and red dyes).

The main organoleptic characteristics for the identification of jam are: appearance, consistency, color, taste and smell [15]. According to the results of students' organoleptic studies, it can be concluded that four samples have consistency, which is slowly spreading over the surface, three samples have less pronounced odor in comparison with other samples, one sample has the flavor of caramelized sugar, which is permissible according to the requirements of the standard. The main difference between jam and jelly is the presence of fibrous or visible particles of fruit weighed therein.

The main physical and chemical parameters used to identify the jam include: the mass fraction of soluble solids, the mass fraction of plant impurities, the content of foreign impurities, the presence of mineral impurities, and the amount of titrated acids [15]. During the study of the mass spectrum of titrated acidity it was found that in all samples it varies from 0.6 to 0.8% (the norm is not less than 0.2%). According to the results of the study of the mass fraction of dissolved soluble solids, it was found that in all samples it ranges from 62.1% to 66.2% (the norm is not less than 68% in plum, spice, peach and cherry jam, and the norm is not less than 62% in all other jams). Investigation of the mass fraction of impurities of vegetable origin has proven that in all samples it ranges from 0.011% to 0.016% (the norm is not more than 0.02% in jams of the highest grade). Investigation did not reveal the mass fraction of sulfurous anhydride and the mass fraction of mineral impurities in the experimental samples of jam. It was confirmed by the Test Protocol of the State Enterprise «Kharkov Center for Consumer Rights Protection». So, all samples meet the requirements of the standard for organoleptic and physical and chemical indicators and potentially can have the same consumers` demand in the trading network.

However, the results of research on demand for jams in the trading network of Kharkov region have proved that technological perfection which is based on compliance with the requirements of standards is not a guarantee of popularity of the product among consumers and the length of its life cycle in the market. The analysis of the consumer market of jam in Ukraine included the identification of priority consumer preferences concerning taste, construction of the consumer profile and the «profile of polarity» of competitor jam and the development of functional properties of jam on this basis. The complex of these actions should be considered as a tool for forming the entrepreneurial competence of future commodity researchers. New conditions for the development of society cause significant changes in the psychology of its members. G. Plekhanov noticed that the psychology of society has a connection with the economy, it corresponds to it, it is determined by it. At the beginning of the XXI century, the Ukrainian nation has a little range of formed market competencies and a low level of economic culture. Whole groups and segments of the nation

do not find the place and forms of activity that would ensure that they realize their potential and satisfy their economic needs. This factor provokes the social instability of society, exacerbating the need for preparation of young people to participate in market relations [6].

Activities based on market relations are related to the concepts of «business» or «entrepreneurship». S. Ozhegov quite fully determined on this subject: «Business – is an entrepreneurial activity that brings income, profit. At the same time, entrepreneurship is not a business but an entrepreneurial style characterized by the principles of innovation, orientation towards innovation in the process of production, distribution and consumption of goods»[5]. The term «entrepreneurship» has a multifaceted meaning. J. B. Say described entrepreneurship as a multifunctional activity when a person (by using his resources and taking all risks) tries to create some product for himself on his own [5]. At the same time J. B. Say emphasized the creative nature of this activity, its difference from the day-to-day standard operations of production management. A significant contribution to the development of a meaningful aspect of the personality traits of an entrepreneur was contributed by J. Schumpeter, who believed that entrepreneurship is an universal general economic function of any social formation, and the entrepreneur is a socio-psychological type of «economic leader», «an innovator», whose activity makes it possible to make new products with previously unknown consumer properties, to develop new markets and sources of raw materials [5].

Modern entrepreneurship in developed countries acts as a factor based on the achievements of scientific and technological revolution and provides the dynamics of society's development. The success of society is impossible without creating a layer of business and energetic people who are capable to realize an innovative idea. The synthesis of literature allows us to identify entrepreneurship as an activity that demonstrates innovation, economic creativity, the ability to organize social and economic mechanisms for attracting new resources into production practice, and also includes the risk and the danger of failures. The entrepreneur acts as the initiator of an attempt to publicly extract new goods, and his task is to make this attempt successful. So, the formation of the entrepreneurial competence of future commodity researchers means that they should be ready to seek for opportunities to provide goods with innovative properties through the use of socially useful resources in order to meet the demand of consumers and ensure the profitability of producers and sellers of goods.

The results of the study by students of consumer preferences in the confectionery market show that in Ukraine the most popular is the strawberry taste of jam, and then in the ranking sequence placed apricot, cherry and peach. Consumers also enjoy the taste of mixed forest berries and apple jams. The results of constructing a consumer profile of confectionery products make it possible to state that the consumer of jams is a city dweller with an average income level and income level «above average». This is due not only to the retail price of jams, but also to the fact that in the rhythm of life of a large city people do not

have enough time and energy to make the product by themselves. The key buyer – women aged 25 to 55, men buy jams much less often. The main factor in choosing jams is their quality. Since the jams belong to the category of impulsive goods, the seasonal nature of the demand for them is a special characteristic: at summer, jams consumption decreases and increases in winter and spring with peak in December. The dynamics and structure of the demand for jams is influenced by the historically formed habit of the elderly population in Ukraine to the preparation of home-made products. The fashion for Ukrainian products, which has been formed over the past three years, has provoked an increase in the production of jams in small-scale enterprises, which creates the prerequisites for the immediate introduction of innovations in the production of an assortment line of this product.

Jam is not a necessity product, but it has a steady demand that has a tendency to grow because jams are characterized by a pleasant taste and smell and plays a significant role in restoring the energy balance of the person. At the same time, high calorie content is a pretext for physicians not to approve adequately the consumption of jam because the mass fraction of sugar in this product is 49%. First of all, it is undesirable for consumption in the presence of diabetes mellitus, disorders in the human body metabolic processes and overweight. So, the results of the monitoring of consumer demand for jams allowed to future commodity researchers to look at this product from the point of view of an entrepreneur who has to manufacture and successfully implement jams on the Ukrainian market. The prevalence of strawberry taste preferences among women and an attempt to increase the consumption of jam by people for which the use of sugar is prohibited allowed to future commodity researchers to develop the socially useful jam with a popular taste (strawberry) based on sugar substitute. The choice of jam's taste was based solely on the results of the consumer survey, the selection of the sugar substitute – on the assurance that its availability will not only provide functional properties of the product, but also will not affect the organoleptic and physical and chemical indicators of quality which are provided by the standard, and will be economically feasible.

Jam can be considered as a three-dimensional network of pectin with syrup. Jam's density is related to the amount of present of pectin and the concentration of sugar syrup, which affects its viscosity. For the expansion of the functional properties of fruit-berry jams it is appropriate to replace a part of sugar syrup with a natural sugar substitute.

Among the natural sugars (studied by students): fructose, xylitol, sorbitol, sucralose, maple syrup, nectar of agave, stevia, coconut sugar, grape sugar, Jerusalem artichoke syrup. They contain a lot of useful minerals and vitamins that help to keep the body healthy, and the minimal impact on insulin ingenuity makes it possible for them to be used by people with diabetes [16]. Stevia and Jerusalem artichoke syrup are the most expedient from the point of view of usefulness, functional properties, low caloric value and efficiency. However strawberry jam with stevia is already present in the assortment line of TM «Useful Condiments», which made it impossible to propose such innovation.

At the same time, the Jerusalem artichoke syrup is not less useful as a sugar substitute than stevia, since it contains a significant number of biologically active components that are constantly needed by humans: minerals of iron, calcium, magnesium, phosphorus, potassium, silicon, manganese and zinc. The benefits of syrup are also added by valuable organic and essential amino acids: apple, fumar, citric, amber and maloney, as well as lysine, leucine, and methionine. There are vitamins B and C, pectin, polysaccharide complex inulin in Jerusalem artichoke. Regular use of syrup by people suffering from diabetes reduces the body's need for insulin and reduces blood sugar, which is confirmed by clinical tests. The syrup helps to cope with stress and helps to the nervous system, improving the general state of the body during constant mental and physical exertion, which exhausts the body. Its use helps to cope with digestive disorders. As a nutritional supplement, syrup can be recommended as a general fixing agent, which increases the ability to work and endurance at high loads for people who conduct mental and physical labor. Such support is especially relevant in conditions of unfavorable environmental conditions and for residents of large cities [17]. So, the replacement of a part of the sugar syrup with the Jerusalem artichoke syrup in the formulation gives the jam the functional properties, substantially expanding the assortment line.

Jerusalem artichoke syrup can be considered as an optimal raw ingredient – a sweetener for making jam, because it contains up to 11% of pectin substances. He also meets two other requirements as a substitute for sugar: 1) this replacement is economically feasible, because the use of Jerusalem syrup in the production of jam will reduce the cost of sugar in 2-3 times; 2) the substitution does not significantly affect the change of organoleptic parameters (taste, odor, consistency, appearance and color) of jam as a finished product [16].

In order to develop a new formula of strawberry jam using syrup from Jerusalem artichoke as a sugar substitute, mathematical modeling was carried out, which made it possible to determine the optimal ratio of sweetener and other components of raw materials, without violating the requirements of DSTU 4900: 2007 «Jam. General technical conditions»: the weight of syrup – 5 g or 10 g per 100 g of finished product. However, the addition of 5 g of syrup in practice revealed a decrease in the mass fraction of dissolved dry matter. As the optimal value, it is expedient to consider 10 g of syrup, as further increase in its amount increased the titrated acidity of the finished product.

During the study, it was found that the addition of an optimal concentration of sweetener (10 g) to the traditional formula of strawberry jam instead of a part of sugar syrup did not change the organoleptic parameters of its quality in accordance with the requirements of the standard. Adding instead of a part of the sugar syrup the optimum concentration of sweetener in 10 g to the traditional formula of strawberry jam did not affect the physical and chemical parameters provided by the requirements of DSTU 4900: 2007 «Jam. General technical conditions».

Thus, a new assortment position – strawberry jam with the addition of Jerusalem artichoke syrup – has all the chances for successful existence on the market. It meets the taste preferences of women as the main consumer of confectionery segment, has clearly expressed functional properties, demonstrating its social utility and expanding the market, does not violate the requirements of standard documentation for jams making and it is economically feasible for the manufacturer.

Approbation of the results of laboratory and market research of students was carried out by means of an industrial test of the proposed innovation with the participation of LLC «Sigmastel» and FOP «Shevchenko D. V.» who are engaged in the production and retail sales of their own products, including confectionery products. The tasting commission confirmed that the proposed formula of strawberry jam with the addition of Jerusalem artichoke syrup has an increased nutritional value that extends the consumer properties of fruit and berry jams. Due to innovations, the content of pectin substances has been increased, the content of sugar is reduced, fruit and berry jam is enriched with vitamins and microelements. The Commission recommended the proposed formula of strawberry jam with the addition of Jerusalem artichoke syrup in the amount of 10 g per 100 g of finished product prior to introduction into production.

Conclusions.

The results of the conducted research prove that the implementation of the CDIO strategy in the professional training of future commodity researchers allows not only enhancing its practical component, but also creates conditions for the formation of entrepreneurial competence. CDIO-education focuses on a wider set of learning outcomes than traditional academic education programs, creating opportunities for developing professional competence, socially meaningful skills and personal growth of a professional. Its principles allowed the Kharkov Trade and Economic Institute of KNTEU to organize a comprehensive practice of bachelors for professional orientation in the form of training, during which in 2018 future commodity researchers explored the market and initiated the development of such products with functional properties such as cherry jam with Jerusalem aristocratic syrup with temporary (trial) name «Top-Cherry», confectionery with gooseberry with the addition of Spirulina «Endorphin» and waffles with erythritol which were called «Fruit in shape». Laboratory research on the compliance of the proposed innovations with the requirements of standards was carried out during laboratory classes in the discipline «Commodity. Food products», testing of results – in the process of preparation for the internal contest of student projects «Youth in entrepreneurship» and external competitions: the City contest of student projects «Kharkov – the city of youth initiatives» and the X International Championship «Youth and Enterprise – 2018» (Gomel, Belarus Republic). The presence of positive results of participation in the competitions will allow launching a range of «PRIVATE LABEL» – confectionery products with functional properties and providing it with the official status of an intellectual property object.

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HEALTH PRESERVING COMPETENCE FORMATION OF A FUTURE ELEMENTARY SCHOOL TEACHER AS A COMPONENT OF THEIR PROFESSIONAL COMPETENCE

Theoretical analysis of the problem of formation of health-preserving competence of the future primary school teachers has been carried out in the research. The emphasis is placed on the fact that one of the components of the system of professional competences of the teacher, the importance of which is due to changes in education, caused by the development of healthcare technologies, is health-preserving competence. The essence of the concept "health-preserving competence of the future primary school teachers" has been analyzed. The structure and content of the health-preserving competence of the primary school teacher has been studied and supplemented in view of the focus on the theoretical and practical readiness of the pedagogue to professional activity. Readiness of the future primary school teacher to professional activity on the basis of healthcare-preserving technologies has been shown. The pedagogical conditions aimed at ensuring effective influence on the formation of health-preserving competencies of primary school teachers are identified: awareness of the future primary school teachers at the level of beliefs of the importance of a healthy lifestyle and overall health-preserving professional competence; the phased implementation of both existing and innovative methods for the formation of health-preserving competence; timely and high-quality provision of interactive health-preserving professional activity and means of its evaluation as well as optimization of cognitive autonomy of students in mastering health-preserving competence; qualitative organization of the subject-spatial environment for securing the necessary life skills, which will promote the comprehensive physical, general-social, mental and spiritual health of primary school pupils.

Introduction.

The socio-political and economic changes taking place in our country have put the teachers at the urgent need for a critical reappraisal of the scientific and theoretical foundations of the educational system, their orientation towards the formation of spiritual needs, healthy habits, physical hardening and preservation of schoolchildren's health. In addition, the state of health of the nation acts as an indicator of the spiritual, socio-economic and medical and biological level of the well-being of a civilized country.

All this prompts the scientific search actualization for the study and development of the problem of the protection and preservation of the health of general educational institutions students of Ukraine. Given the urgency of the problem of preserving the health of Ukrainian citizens, most state documents related to education (National Program "Education (XXI Century Ukraine)", "Children of Ukraine", National Doctrine of Education Development, " Nation Health ") , one of the priority tasks defined the formation of the healthy lifestyle basis through education, health preserving educational environment creation, formation of spiritual, mental and physical health of the individual, encouraging children's responsible attitude to it as the highest individual and social value [1].

Theoretic healthcare principles of future teachers training were regarded by domestic (V. Bobrytska, Y. Boychuk, V. Gorashchuk, Y. Zakharina, N. Denysenko, A. Dubogay, A. Konokh, N. Moskalenko, I. Potashnyuk, L. Sushchenko, etc.) and foreign (T. Vilenska, I. Kuznetsova, Y. Naumenko, K. Oglobin, V. Sorokun, L. Tykhomyrova, etc.) scientists.

On the basis of scientific works study, it became clear that the concept of "competence" is disclosed as: a set of certain knowledge, skills and attitudes that make it possible to solve certain problems (V. Bolotov, V. Krayevskiy, V. Krichevskiy, V. Maslov, O. Pometun, V. Serykov, A. Khutorskiy and others); a quality, a feature of a person, an individual characteristic of the degree of its compliance with the requirements put forward (T. Golovanova, A. Markova, N. Murovana and others); an ability to perform certain activities (S. Bondar, G. Polyakova, I. Rodygina and others); an indicator of a high degree of education, a person's awareness, the result of their rich life experience accumulation (R. Vdovychenko, I. Zymnya, S. Lokshyna, V. Melnyk, P. Shcherban and others).

1. The essence of the concept of "health preserving competence of future elementary school teachers"

Modern society demands higher educational institutions graduates to have high qualification, readiness to work in an innovative educational environment. Taking this into account, one of the leading trends in the modern society progress is the priority of the educational branch development, solving the problems of pedagogical staff training, capable to implement innovative processes using the appropriate teaching, development, education methods. The traditional system of education, the content of which is based on the didactic triad of knowledge, qualifications and skills, should be strengthened for the qualitative implementation of the social order for the modern society specialists training. Knowledge acquired by students at higher education institutions is often inadequate, as the graduate cannot use them at a sufficiently high level in specific situations. Therefore, analyzing the problems of reforming the educational system, most scientists tend to the idea of a competent approach in assessing the results of learning, the formation of competences on the basis of modern advances in science and technology.

The state documents dealing with the field of education consider the competence approach:

1) as one of the most important education development directions, which will eliminate the discrepancy between the existing teacher training and the real educational needs of society;

2) as a means of orienting education to personally significant and practical-oriented learning outcomes, which allows for the learning goals and content integration;

3) as one of the approaches to assess the students' professional training effectiveness, according to which the criteria of readiness for professional activity are the competencies system possession in this field;

4) as one of the methods of modeling learning outcomes and their presentation as norms of education quality;

5) as a way of identifying the basic skills that manifest themselves and are formed in activities through the use of knowledge in solving educational professional tasks.

It is necessary to differentiate the content of the concept of "competence" and "competent". In the dictionary of foreign words "competence" means awareness, and "competent" means experienced in a particular field, some issue; capable of solving a particular case. In the "New Explanatory Dictionary of Ukrainian Language" (compiled by V.V. Yaremenko) a "competent person" is someone who has sufficient knowledge in a particular field, is well aware of something, skilful, qualified [2].

In the Reference Dictionary of Professional Pedagogy (edited by A.V. Semenova) a competent person is characterized as a specialist with structured (organized) knowledge, skills, which give them the idea to solve (disregarding the situation) the problems, inherent to the certain direction of professional activity. I. Zyazyun quotes the following features as the components of a competent person: knowledge diversity, flexibility, actualization speed, presence of key elements, categorical character, and possession of not only declarative knowledge but also procedural, having awareness of their own knowledge [3, p. 242-243].

On each life stage of a person professional competences absorb new sense, new organizational and methodological forms and methods, new needs and appropriate approaches to individual professional, social life aspects integration [3, p. 8].

The basic principle of "competence" is the idea of a competent person development, not only with necessary knowledge, professionalism, high moral properties, but also with the ability to act properly in certain situations, by applying the knowledge and by taking responsibility for certain activity. The quality of the graduates' competence is significant in the context of educational establishments and diverse educational programs assessment.

In pedagogical literature, the priority of competence as one of the defining personal characteristics of the future teacher, along with humanism, democracy, spiritual culture, communicative, organizational talent, is legitimately recognized [4, p.10-14]. Competence means not only proper awareness of a wide range of issues, but also a corresponding style of teaching activity based on knowledge and practical experience. It is a necessary link of continuous improvement of the already acquired intellectual and practical experience, the steps of finding effective ways to increase the pedagogical skill and achieve the identity of a specialist’s personality. [5, p. 4].

On the basis of literary sources analysis, we can conclude that in the scientific psycho-pedagogical literature there are points of view concerning the essence of professional pedagogical competences, which are sometimes connected with the pedagogical culture, pedagogical education. As scientific practice testifies, most investigators look at the professional pedagogical competences in two aspects: as a professional teacher training; as a result of a specialist’s training for the purpose of the career promotion.

If you analyze competence from the pedagogical activity point of view, then, according to V. Strelnikov, this is the knowledge of the educational process, modern problems of pedagogy, psychology and subject of study, as well as the ability to apply this knowledge in everyday practical work [6, p. 3]. The thought of I. Zyazun is worth attention, that "professional-pedagogical competence reflects the readiness and ability of a person to perform professionally pedagogical functions in accordance with the standards and regulations accepted by society at this time. That is why the term of "competence" has a concrete historical certainty and can be evaluated only in practical activities " [7, p.14] .

According to numerous practical researches (V. Bondar, L. Karamushka, V. Maslov, O. Pometun), the professional pedagogic competences of a specialist are more obscure concepts and include the implicit meanings: instrumental capacities (knowledge, skills, and qualifications) and their personal qualities. The vast majority of teachers-tutors in the structure of pedagogical competences includes the ability and experience of professional activity [8, p. 17]. They reveal practical aspects of teacher's work. In the vast majority of studies, the basis of this concept was the knowledge that is the basis of the cognitive-content aspects of activity, through which the theoretical basis for teacher training is revealed.

On the basis of professional competencies, such work of a teacher should be ensured, in which a teacher's personality is realized at a sufficiently high level, pedagogical communication is carried out, pedagogical activity, in which high results of education and upbringing of pupils are achieved. Pedagogical competence of the teacher is a unity of his theoretical and practical preparation for the pedagogical activity implementation [9, p. 147-148]. In vocational education, according to G. Ball, the primary task is to introduce the personality of a future specialist into a specific subsystem of human culture, namely, professional culture. He considers the personality of a specialist as a system of characteristics of his professional culture, an integral part of which is professional competence [10, p. 53].

The acquisition of a professional competences system by a teacher involves mastering necessary knowledge, skills and abilities, which determines the competencies formation of necessary levels, sufficient for his pedagogical activity, pedagogical communication, his personality as a carrier of certain values, ideals and pedagogical consciousness. Analysis of basic research related to the definition of the list and content of professional competencies of a teacher (O. Bondarevska, N. Kolominskiy, A. Markova, L. Mitina, O. Ovcharuk, V. Slastonina) showed that the formation of the professional competences of the teacher involves obtaining a solid knowledge of the subject, methods of teaching, didactics, psychology, pedagogy, development of pedagogical skills related to the teacher’s actions in different pedagogical situations, the acquisition of the necessary knowledge, skills and qualifications of working with health preserving competencies).

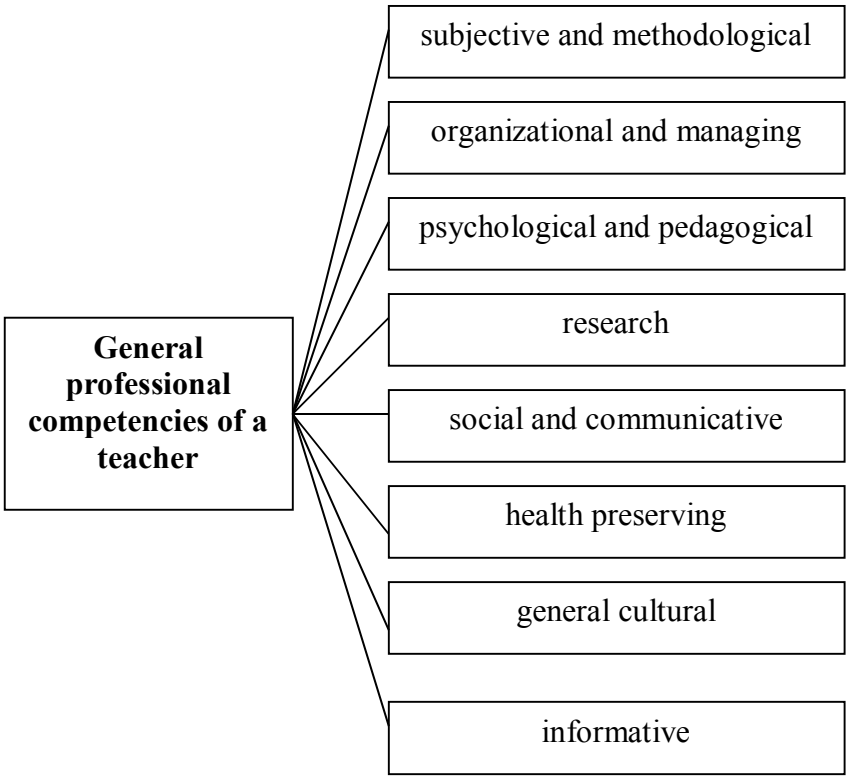

Fig. 1. Teacher's professional competencies system

One of the components of a teacher's professional competence, the importance of which is due to current changes in education caused health preserving technology development are *health preserving competences.*

Among the key competences that should be mastered by a future primary school teacher, health preserving ones have priority. They serve as an indicator and, at the same time, the result of a teacher's professional and personal readiness to work with children at school, since performing any pedagogical task has a personality-oriented approach. In contrast to the international standards of quality specialists training, the domestic legislative framework supports the need not only to provide quality education, but also future primary school teacher's health preserving competencies formation.

In the current socio-economic conditions, good health is a basic condition for the implementation of human biological and social functions, versatile solid foundation of self-identity, regardless of age and gender. The level of health is determined by the ability of the body to adapt to the conditions of study, work, life. During the development of world history of humanity, human health was regarded as the greatest treasure of all times and peoples.

The health of any nation today is regarded as an indicator of the civilization of a particular state, reflecting the general socio-economic position of society. The level of health is precisely that of elementary school students, since, according to experts, about 75% of adult diseases is a consequence of living conditions in childhood and young years.

2. Contents of health preserving competences of future elementary school teachers.

The contents of health preserving competences should form an active life position for students. Modern competence education involves the formation of future classroom teachers in the need for constant knowledge updating, skills and abilities improvement that, in the learning process, and then in professional activities, become competent and form a multi-faceted "competence" formation.

The main component of health preserving competence of future primary school teachers should be health preserving classes. Health preserving classes are such an organization of the educational process that allows to adhere to the content and volume of educational material, methods and forms of educational and cognitive activity to age and individual characteristics of primary school students, preserves their ability to work, and forms a culture of health.

A modern graduate of a pedagogical university must, of course, have the competencies that allow him to maintain the status of a healthy person for as long as possible. I would like to propose the following interpretation of the health preserving competence concept. The derivative concept from the category of "competence" is "health retaining competence". The concept of "health preserving competence" has been introduced to the scientific circulation of domestic pedagogical science relatively recently, at the same time as "health-saving educational technologies", "the formation of a health culture", etc. Health preserving competence of a future elementary school teacher is a complex of systematic knowledge and ideas about positive and negative changes in the state of both their own health and the health of others; the ability to form an effective program (or plan) for maintaining the health of students in the educational process; ability to create health preserving educational environment; possession of methods to organize activities to protect health and healthcare; possession of educational technologies that save students' health; studying the effectiveness of educational process in healthcare, as well as the ability to organize and implement prevention and healthcare.

In the structure of health preserving competence of future primary school teachers, you can distinguish three main components: 1) meaningful, 2) active and 3) personal components. The informative component involves the possession by a future primary school teacher of knowledge on a particular discipline, as well as on related disciplines, expressing the quintessence of the specialty (conceptual competence) studied by the student.

The conceptual competence structure is determined on the basis of the following considerations. Knowledge of any particular side of the question for a specialist is not enough, since he cannot make a decision on the basis of such knowledge order to demonstrate his competence. Knowledge by its very nature is complex and indivisible whereas separate distinct representations do not form a system of knowledge. But it will not become integrable if its components have been studied separately. Integration needs to be

provided by teachers who work in collaboration during the whole learning process of future primary school teachers' preparation. Such an algorithm of action will give a completely different level of knowledge quality, (as in the integrative study, associative relationships will be produced, which mainly characterize knowledge quality). Thus, there is a need to co-operate the efforts of many teachers who are somehow involved in forming health preserving competence of future primary school teachers.

The next activity component includes invariant professional health-saving knowledge, which includes practical skills (mastering). As well as the whole range of practically oriented classes (seminars, laboratory practice, practical classes, solution of situational tasks, business and role games, etc.).

The third, personal component, includes integrative personal qualities, expressed in the presence of innate abilities to study and the ability to independently acquire knowledge, that is, to independently work with scientific and educational literature (to write abstracts, reports, to participate in research work, etc.).) the future primary school teacher must possess not just any kind of intelligence, but to be able to use it in strict accordance with the situation.

The content of health preserving competence, above all, is determined by those didactic units that determine the existing approved work program of discipline, on the basis of which, a complete teaching-methodical complex of discipline is being developed, aimed at forming this competence. One of the leading areas influencing the formation of health preserving competence should be developed in accordance with modern requirements, the content of which has a person-oriented orientation, that is, information obtained in the course of its implementation, should be assigned to students as personally significant. In addition, when developing educational programs and curricula of new state educational standards, it is necessary to strengthen the requirements for the assessment of the educational result. Health preservation in the modern educational environment should be considered from the standpoint of an exclusively holistic process, which has its own laws, principles and features. It is extremely necessary to develop a comprehensive structure for the health improvement of primary school students, which will combine unequal components that will function according to certain principles and rules. So, for the formation of health retaining competence (readiness for health preserving activities) for future primary school teachers, the following conditions must be fulfilled:

1. Competence should be formed by specialists in the field of knowledge, which primarily aims at basic specialized education (medical or biological) and conducting scientific activities on the discipline profile. At first glance, this is obvious, but in some cases, such requirements are neglected, which is unacceptable.

2. The structure of health preserving competence must be integrative and implemented through a set of interrelated disciplines of the medical-biological cycle, combined by a common semantic load.

3. The content of health preserving competence should be correlated with the general cultural and professional competencies allocated in the state educational standard in the profession.

The current state of education development in the conditions of unfavorable influence of environmental and social factors is characterized by the search for ways and means for improving and strengthening the health of primary school students at general education institutions. Formation of new modern pedagogical requirements requires a qualitatively new approach to human needs, stable motivations of positive social behavior formation. This, in turn, creates conditions for the modernization of education in accordance with modern requirements, which require the introduction of new approaches to the training of primary school teachers. One of the most important directions in which pedagogical science should move is the training of specialists who are capable of carrying out pedagogical work using health preserving technologies [11].

According to the Ministry of Healthcare of Ukraine, 50% of schoolchildren are experiencing functional deviations in the state of different body systems, and in 42% have various chronic diseases, general disability level has increased by 19%. Only 27% of healthy children come to the first class, and 6-9% graduate school being healthy.

According to UNESCO, Ukraine occupies one of the last places in the world by the estimates of adults and children health status (low life expectancy, high mortality, especially among children, high percentage of physical, mental and childhood disabilities). This is facilitated by ecological catastrophe, tensions of the social situation, low level of medical care, complexity of the curricula and intensification of the educational process of the modern school [11].

3. Pedagogical conditions of health preserving competence formation of future primary school teachers

Determining the pedagogical conditions for the formation of the health preserving competence of future primary school teachers is quite possible due to the reorientation of modern vocational and pedagogical education to modern and continuous improvement of the European standards, and provides in the first place the training of a competent specialist capable of practically acting, applying individual techniques and experience of successful actions in situations of professional activity and social practice.

In today's conditions, it becomes necessary to determine and substantiate the peculiarities of the effective use of pedagogical conditions for the formation of health preserving competences of future primary school teachers. The conducted analysis of existing scientific works has revealed mainly surface and episodic study of them.

Our research is devoted to the fact that future primary school teachers actually have an opportunity to overcome the inherent modern pedagogy's thirst for the accumulation of knowledge and skills and begin to bring up a more humanistic attitude both to the environment and to their own health. None of the existing and well-known pedagogical

technologies regarding the formation of health preserving competences does not foresee the development of a "holistic" view of physiology, anatomy and biomechanics of the human body in the process of preparing future specialists. Unfortunately, primary school teachers do not have such competences today.

In the curricula for the training of primary school students there are no opportunities for mastering the knowledge and skills of visual diagnostics of students' motor activity, practical methods of muscular testing (in order to prevent injury and improve the level of general physical development), the use of techniques and methods of kinesiotherapy is not foreseen at work with schoolchildren classified to various special medical groups by health.

The passivity of students, future primary school teachers to their own health and wellness activity in the learning process is mainly due to family, school, and general school education, lack of necessary motivation at all stages of physical development and the formation of future primary school teachers.

Determining the pedagogical conditions for the formation of health preserving competence of future primary school teachers should proceed from the theoretical and practical foundations of educational process organization and the component structure of health preserving competence (motivational-value, cognitive-perceived, activity-behavioral components).

We consider the main recommended directions of pedagogical activity to form the health preserving competence of future primary school teachers:

- aiming at the value of own health and health of others;
- providing knowledge about the fundamentals of health and technology for its preservation;
- mastering visual diagnostics methods;
- knowledge of existing methods of improving physical qualities and ability to control their development through muscle testing;
- creating conditions for students to master the behavioral patterns of health.

The use of complex diagnostic and prognostic control should also be an important pedagogical condition for the formation of the health preserving competence of future primary school teachers to ensure timely determination of the functional abilities level of the students, general physical activity adequacy, early diagnosis of illness or injury signs.

There is nothing more valuable than human health, but we understand this mainly at the beginning of health deteriorating process. In order to prevent such consequences, we must work actively towards the formation of a health preserving world of our entire population. And, as an example, we can have an attitude of many European countries towards a healthy lifestyle and physical education. In the vast majority of countries in the world, the training of specialists for primary, secondary and tertiary education is not limited to the acquisition of certain skills. Pedagogical conditions focus on the formation of such principles and concepts as respect, interaction, fair play. The overwhelming majority of European state education systems devote

large-scale initiatives and have established national strategies for creating pedagogical conditions to form health preserving competences of future teachers. After all, movement is not only an urgent need for a person, but also a fundamentally important factor in diverse and comprehensive development.

Aristotle once noted: nothing so depletes and destroys a person as a prolonged physical inactivity [1, 3 , p. 237] . It is no secret that the main enemy of the health of our time is a sedentary lifestyle. Concerns are related to a rapid deterioration of the general state of physical and mental development of the younger generation, reduced life expectancy, increased mortality, especially among children. Therefore, the main task in determining pedagogical conditions for the health preserving competencies formation at the present stage of development of our state should be the preservation and strengthening of children's health, the formation of positive motivation for a healthy lifestyle directly to future primary school teachers.

The need to change the attitude towards the health of child in the state education system becomes quite obvious. Today, the lesson as the main form of the educational process organization cannot be considered modern, despite being distinguished by a variety of state-of-the-art technical means and pedagogical conditions, if the child during his conduct deteriorates his health.

The overwhelming majority of health problems that today's primary school students suffer are direct consequences of inadequate adaptation to forced body position conditions.

From the methodological point of view, the process of health preserving competences formation of future primary school teachers, first of all, involves active stimulation of a thorough and comprehensive knowledge of the values, knowledge, norms of health culture acquired by previous generations of teachers. In our time, the main emphasis, in creating pedagogical conditions for the formation of health preserving competences of future primary school teachers, should be made on the expediency of further comprehensive development of pedagogical competencies existing in our educational system.

In the context of existing innovative approaches to educational process during continuous professional training, it is extremely necessary to teach future primary school teachers to implement actively various innovative decisions regarding the formation of health preserving competences. We consider the only possible direction of such pedagogical activity to be the development of self-knowledge, self-organization and self-improvement of a future primary school teacher. In practical aspect it should be based on those considerations that the formation of health preserving competences of primary school teachers depends on the specific content of teaching.

Based on the foregoing, we have identified the existing pedagogical conditions aimed at ensuring effective influence on the formation of health-saving competences of primary school teachers:

1) future primary school teachers' awareness of the level of beliefs of healthy lifestyle importance and overall health and professional competence;

2) phased implementation of both existing and innovative methods of forming health preserving competences;

3) timely and high-quality provision of interactive health preserving educational and professional activities and means of evaluation and optimization of cognitive independence of students in mastering health preserving competence;

4) qualitative organization of the subject-spatial environment for securing the necessary life skills, which will promote the comprehensive physical, general-social, mental and spiritual health of primary school students.

The list of proposed pedagogical conditions is in effective functional and completely logical interconnection and interdependence with other pedagogical competencies.

The main factor in health strengthening is education for a healthy lifestyle preservation, subsequently, the formation of future educators readiness for health preservation activities. This is the most relevant and significant today, because it has long been known that it is better to prevent the development of a disease than to treat it.

The question of future primary school teachers health preserving competences formation is one of the priority tasks of social development, predetermining the relevance of the theoretical and practical development, the necessity of deploying relevant research. The problems of health and the formation of health preserving competences of future primary school teachers, the conditions for their optimization, have become the subject of research by many modern philosophers, physicians, psychologists, and educators. Unfortunately, the change in the education system is not always in the interest of the health and well-being of children. Very often, the introduction of techniques implemented in practice not only fails to bring a positive result to improve the health of schoolchildren, but sometimes worsens it. As a result, active introduction of innovative technologies into the educational process of primary school leads to an even greater intensification of the learning process, hypodynamics growth, physiological parameters deterioration and lower functional reserves of elementary school students.

Significant role in the determined pedagogical conditions for the formation of health preserving competences of future primary school teachers is given to educational institutions, including the highest level. Many domestic researchers emphasize that the formation of health preserving competences of future primary school teachers, first of all, must meet the requirements of the present and help future teachers in their own health preservation, the formation of a health culture and need for a healthy lifestyle; health preserving technologies introduction and health-preserving environment creation at a higher educational institution. We agree with existing considerations regarding consideration of a healthy lifestyle motivation for future primary school teachers as a certain system of value orientations, an internal motivation for professional health preserving competencies formation.

Motivation provides personal meaning and significance of all health preserving activities of future primary school teachers. Positive motivation is part of a common system of values that future classroom teachers are aware of and translate into personal principles, beliefs, settings and content of health preserving activities in their further work with primary school students. The realization of health preserving competence formation when working with primary school students involves the ability of future primary school teachers to teach children gradually: the necessary knowledge on the preservation and further gradual strengthening of their own health, understanding of factors contributing to the development of a healthy lifestyle, awareness of the importance of constant observance of a healthy way of life, acquisition of the theoretical foundations of life skills that will contribute to their further general physical, social and mental and spiritual health.

The unquestionable theoretical basis for this is the knowledge of future primary school teachers regarding: rational nutrition systems, daily motor activity needs, personal hygiene, possible mode of activity and rest; comprehensive communication, understanding of existing and emerging feelings, physical needs and physiological problems; ability to solve conflicts; joint activity organization (social health preservation basis).

We believe that obtaining a consistent positive result in achieving the goal of creating health preserving competences for future primary school teachers is possible only if the systematic and consistent receipt and implementation of not only existing and also innovative information on health preserving technologies and methods development is received in the educational process following the leading countries of the world.

Conclusions.

The problem of preparing future classroom teachers for diagnostic activities in acquiring health preserving competence is an important step in the qualitative restoration of primary school students organisms by means and methods of physical culture and it is relevant and timely. Taking look at the described problems as to the pedagogical conditions of health preserving competence formation of future primary school teachers, modern requirements to professional competence of the teacher , his practical training attain more distinct character . To solve this problem it is necessary to change the system of teachers' training, supplementing its knowledge that help form the teachers' modern valeological outlook. Thus, we came to the conclusion that health preserving competence is a multi-faceted process of knowledge formation, skills and abilities improvement, gaining experience in preserving health, manifested in the ability to lead a healthy lifestyle and directly proportional to the increase in motor activity and the conscious formation of health culture. Health preserving competence is a complex structure, which combines professional and personal aspects, meaningfully and functionally related to other personal basic education, qualities and characteristics, first of all - professionalism, health and physical culture, professional competence; determines personal and socio-professional maturity formation and the position of the teacher.

Given these aspects, it is now necessary to introduce new educational standards into the system of higher pedagogical education, to substantiate new approaches to the formation of active, responsible, comprehensively thinking and highly educated future primary school teachers that would have a high level of personal health culture. This will have a positive impact on the formation of quality health preserving competences of future primary school teachers and will contribute to the rapid improvement of domestic education level in the world's scientific space today.

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FROM THE EXPERIENCE OF TRAINING SPECIALISTS OF FORESTRY AND LANDSCAPE GARDENING

Abstract*. In this article the experience of practical training of applicants for higher education in educational levels "Bachelor" and "Master" of forestry and landscape gardening in the Belotserkovsky National Agrarian University and Uman National University of Horticulture was analyzed. Considerable attention is paid to the problem of modernization of the content of practical training of specialists in the conditions of the transformation of Ukrainian society, which is carried out under the influence of globalization and integration processes. As a result of the analysis, it was established that the model of practical skills during training in institutions of higher education is formed at four stages. The primary stage of the formation of a model of practical training takes place at laboratory-practical and practical classes, which usually take place in educational laboratories, classrooms and studies , although non-standard classes in the workplace even at this stage help to improve significantly its quality. The second stage of the model of practical training is the consolidation of skills acquired during practical exercises when conducting the training practice. The third stage of the formation of a model of practical skills takes place when performing individual research tasks, calculation and graphic work, courseworks and diploma projects. The final fourth stage of the model of practical training of students occurs through the formation of practical skills in the workplace - while conducting manufacturing practice. Individual scientific research work of students under the supervision of a teacher at forestry and landscape gardening facilities contributes to the development of creative abilities and increases the level of practical training.*

Introduction.

The development of national education in Ukraine, its transformation in order to integrate into the European system increases the requirements for higher professional training of forestry and landscape gardening specialists, their qualitatively different theoretical and methodological support of scientific research activities.

The legal framework for professional training of forestry and landscape gardening specialists in Ukraine are: the Law of Ukraine “On Education” (1996), the Law of Ukraine “On Vocational and Technical Education” (1998), the Law of Ukraine “On Higher Education” (2014) as well as the State National Program “Education” (Ukraine of the 21st Century) (1993), the National Doctrine of Educational Development (2002), the Concept of the Organization of Master Training (2010), the Regulation “On the Approval of the National Qualifications Framework” (2011), the Decree of the President of Ukraine “ about national strategy for the development of education in Ukraine and for the period up to 2021” (2013).

Not far ago , in the institutions of higher education of Ukraine, a forestry and landscape gardening belonged to the same area 6.090103 “ Forestry and Landscape Gardening”, and now these are two separate specialties - 205 “Landscape Gardening” and 206 “Forestry” (Resolution of the Cabinet of Ministers of Ukraine, 2015). Nowdays, more than a dozen institutions of higher education in Ukraine train specialists for work in the system of forestry and landscape gardening at the educational levels of "Bachelor" and "Master" .

Modern pedagogical science and practice face the difficult task of training future specialists for effective professional activity. Ensuring university graduates with the skills necessary on the employment market is an important direction in the reform of education. Today, there is an imbalance between the skills that students develop and the skills they need at the workplace. Therefore, the reform of education shall be in accordance with worldwide trends. Practical skills are determining for professional training of future specialists in forestry and landscape gardening, the formation of which takes place mainly in didactic and methodically competently organized and conducted laboratory-practical and practical classes, training and manufacturing practices and scientific research work. Taking into account the European integration trends of Ukraine, intentions to join the European higher education area, the social importance of ensuring the quality and effectiveness of the domestic system of professional training for forestry and landscape gardening ,the aim of our research was to analyze the experience of practical training of future forestry and landscape gardening specialists using as an example Uman National University of Horticulture and Belotserkovsky National Agrarian University . In Uman National University of Horticulture, the training of specialists of this profile originates from the Uman College of Agriculture and Horticulture, which was transferred from Odessa to the city of Uman in 1868. The substantiation of the model for the formation of practical training for forestry and landscape gardening specialists will help them to approach the conditions of manufacturing.

1. High-quality practical training is the key to the success of future professionals

Nowdays, the education system is in the process of transition from an adaptation educational model to an innovative one, in the most countries of the world. Ukrainian society also requires urgent reforms in the education system, since the level and quality of education is an indicator of social development. Therefore, educational processes in Ukraine should be focused on the training of highly qualified specialists in various fields who promote the development of the Ukrainian state as a whole (Malik, 2017; Tkach, 2018; 2018b). The effectiveness of the implementation of this task is mostly determined by the activation of the role of the competence-based approach, in turn, provides for the organization of the educational process aimed at improving the quality of graduate training, in particular, mastering the competencies that contribute to the successful implementation of professional activities (Prigodiy, 2014). At the present time, international experts in the world forums are discussing changes that need to be implemented in education, and even published a list of skills for future specialists necessary until 2020, where, among others, they point out the need for creativity in professional activities. Therefore, today there is a real obligatoriness to substantiate the model of the formation of practical training at the educational levels of "Bachelor" and "Master" in forestry and landscape gardening for its further implementation in the educational process.

In connection with the necessity to increase the forest cover of the Earth and to improve the attractiveness of gardens and parks, which in Ukraine usually have a centuries-long history, and to develop new ones, professional training of qualified specialists of forest and landscape gardening at the present time is relevant both in theoretical and in practical. Different approaches to the definition of the essence of the concept “skill” and its classifications in modern didactics were developed by such scientists as Yu. Babansky, I. Lerner, N. Loshkareva, V. Palamarchuk, A. Savchenko, and others, who grouped the skill according to various characteristics. (Polupan, Vygovskaya, 2016). However, they all agree that practical training is very important for the professional training of students, because success in this profession depends mainly on the ability of a specialist to create or design plants, carry out appropriate thinning, shaping trim, to place plants in the interior or exterior and the like.

The practical skills of future specialists in forestry and landscape gardening are important for the training of a competitive specialist in the forestry and landscape gardening industry. Special attention is paid to the practical training of students of these specialties at the III-IV year of the educational level "Bachelor" and the III course of the educational level "Master", where according to the educational and professional program and curriculum special disciplines are taught.

Practical skills include: mastering the skills and abilities of a creative nature; the acquisition by students practical skills by direct involvement in the process of professional activity; possession of technical training equipment, computer graphics, management of

Computing and Information Systems; development of students' ability to use their theoretical knowledge practically , to start mastering their future profession in educational laboratories equipped with the necessary technical devices and tools (Polupan Vygovskaya, 2016).

The educational institutions are faced with the task of creating conditions in which the professional and personal qualities of students who are in demand in the employment market in this particular area are developing. Forestry and landscape gardening specialists should receive integrative professional training in designing and creating all types of plantings, maintenance and management in various forests, creation, reconstruction, restoration and conservation of landscape gardening objects, growing seedlings using the latest technologies. Therefore, one of the main criteria for the success of a forest and landscape gardening specialist's activity are achieved practical skills.

Scientists and educators interpret the concept of "skill" in different ways, but its essence does not change. So, E. Boyko, considers “skill” as a manifestation of activity in all possible ways; Yu. Babansky - as a conscious possession of any method of activity; M. Kagan - as the unity of knowledge, experti and abilities of the individual; N. Kuzmina - as a new fusion of knowledge, skills,expertises , experience and creative abilities of a person (Babansky, 1987; Polupan, Vygovskaya, 2016). Summarizing what has been said, it can be stated that a skill is a method of performing an action learned by a subject, provided with a set of acquired knowledge and expertises.

Formation of skills happens through exercises, creating opportunities to perform an action not only in the usual, but also in a modified non-standard conditions, where they are revealed through dedication, awareness, ability of the individual to generalize and realize the creative nature of the activity (Koziy, Vygovskaya, 2011).

According to the classification of skills, there are several approaches. Babansky Yu. (1987) identifies educational and organizational, educational and intellectual, educational and informational, and educational and communicative skills. Nikitina O. (2012) splits the ability to constructive, communicative, organizational, didactic, perceptual, suggestive, cognitive, practical skills in the field of technology.

Let's analyze more detailed the formation of a model of practical training for students of forestry and landscape gardening on the example of the Belotserkovsky National Agrarian University and Uman National University of Horticulture, where the training of forestry and landscape gardening specialists is deeply rooted.

As a result of the analysis, during training in institutions of higher education it was established that the model of practical skills is formed at four stages. The primary stage of the formation of the model of practical training takes place in laboratory-practical and practical classes, which usually take place in educational laboratories, auditoriums and classrooms. However, there are innovative classes.

In the Belotserkovsky National Agrarian University, about 30% of practical classes take place outside classrooms and laboratories - in a greenhouse, at a biostationary , in garden centers, architectural bureaus, in educational and experimental forestry, where students directly acquire practical skills in plant reproduction and growing, care for plants, the basics of design and composition. For this purpose, the university has its own training base - a biostationary with an area of 1.9 hectares, where about a thousand one, two- and perennial species, forms, varieties and cultivars of ornamental plants and educational and experimental forestry with an area of 270 hectares are represented. A collection of 32 species, forms and cultivars of ornamental coniferous plants, 85 species and forms of a cotoneaster, 15 varieties of roses, 6 varieties of magnolia trees is collected at the biostationary of the Belotserkovsky National Agrarian University. The collection of floral and ornamental plants includes about 50 species, forms and cultivars of annual, 20 biennial and more than 600 species, forms and cultivars of perennial flower and ornamental plants. Among the annuals, the largest collection is the collection of Chinese asters, which amounts 180 varieties and hybrid varieties of domestic and foreign breeding, as well as 100 varieties of cultural dahlias and 32 species and varieties of marigolds, 20 varieties of cannes, etc. (Ischuk, 2011b; Oleshko, 2012).

At Uman National University of Horticulture, the own production base for applicants for higher education in specialty 205 “Forestry” is a nursery of the Department of Forestry and the Belogrudovskiy Forest of the university’s production department with an area of 462.4 hectares, among which: 8.2 hectares of shelter belts and 18.7 hectares protective belts of forests of highways of national importance (Shlapak, 2017).

In addition, students have the opportunity to undergo practical training in a number of state forestry enterprises: "Umansky forestry", "Lisyansky forestry", "Zvenigorodsky forestry" and "Smelyansky forestry" of Cherkassy regional forestry and hunting management; "Ilintsy Forestry", "Gaisinsky Forestry" and "Bershad Forestry" of Vinnitsa Regional Department of Forestry and Hunting; "Savransky Forestry" of the Odessa Regional Department of Forestry and Hunting; "Belotserkovsky forestry" of the Kiev Regional Department of Forestry and Hunting; "Golovanevskoe Forestry" of Kirovograd Regional Department of Forestry and Hunting.

The collector's areas of the Department of landscape gardening and hothouse-greenhouse complex is an in-house productive base for applicants for higher education for specialty 206 "Landscape Gardening" in Uman National University of Horticulture. The total area of greenhouses is 775 m^2, including:

- greenhouse No. 1 - 255 m^2 (collection of citrus: lemon; oranges, grapefruits, tangerines, more than 34 taxons in total)

- greenhouse No. 2 - 272 m^2 (collection of subtropical plants: kiwi, persimmon, pomegranate, fig, ziziphus, etc.)

- greenhouse No. 3 - 248 m^2 (is under reconstruction, it is supposed to be used for laying a collection of subtropical and tropical fruit and ornamental crops).

Hothouses - the total area is 324.9 m^2, including No. 1 is 72.9 m^2 (a collection of succulents and xerophytes); No. 2 - 57 m^2 (is used to adapt ornamental plants); No. 3 - 65.1 m^2 (for hardening of plants); No. 4 - 66 m^2 (seedling section , a kiwi nursery and premises for growing plants); No. 5 - 63.9 m^2 (Cycas hothouse, palms with an average age of 250-260 years).

Now in the hothouse-greenhouse complex of Uman National University of Horticulture grown plants from more than 40 families.

Forestry and landscape gardening specialists must have a number of practical skills, in particular, they must know the theory and be able to perform all types of work that relate to the management of forestry enterprises, green building, botanical gardens and dendrological parks.

The new Law of Ukraine “On Higher Education” (2014) offers institutions of higher education substantial autonomy, which allows them to compile independently educational and professional programs and working curricula. The curriculum introduces a cycle of humanitarian and socio-economic disciplines, a cycle of disciplines on natural science, a cycle of professionally oriented disciplines, normative disciplines and selective disciplines for choosing by educational institution and students. Exactly the cycle of professionally oriented disciplines, normative and selective disciplines provides professional practical training of students.

According to the requirements of professional training of forestry and landscape gardening specialists and in accordance with the educational and professional programs and curricula, laboratory-practical and practical classes are held at the following disciplines: “Forestry”, “Forest Studies”, “Mechanization of Forestry Works”, "Forest Taxation", "Basics of Hydrotechnical Melioration", "Aerospace Methods in Forestry", "Information Technologies in Forestry", "Basics of Forest Exploitation", "Dendrology”,“ Decorative Dendrology ”,“ Ornamental Horticulture”,“ Floriculture ”,“ Gardening of Populated Places ”,“ Landscape Graphics ”,“ Landscape Architecture ”,“ Computer Graphics ”,“ Topiary Art ”, etc. (Table 1) . During laboratory-practical and practical classes on mentioned above disciplines, future specialists of the forest and landscape gardening study the range of introduced and native ornamental plants, design and create forest crops and green construction objects, learn how to manage properly the forest in various economic purposes, provide care about green sculptures, dense linear plantations; create frames for interior decoration; get acquainted with the technology of the formation of various sculptures of grassy and woody plants; cut plants; perform the graphic part of the design and working documentation of landscape projects in accordance with the applicable standards and using graphic means of the visual arts. The leading teachers developed guidelines for the implementation of practical work to the study of each discipline

Table 1.

The distribution of time by types of practical training of students among the disciplines of the professional cycle of educational levels "Bachelor» and «Master

The name of the discipline	Course / Semester	Number of credits ECTS	Hours				
			lecture	practice	training practice	individual work	Total
Specialty 205 "Forestry", educational level "Bachelor"							
Basis of Vocational Education	I/2	3,0	28	28	30	42	128
Forest Phytopathology	III/1	4,0	34	34	24	76	168
Forest Entomology	III/2	2,5	26	26	18	36	106
Greening of inhabited areas	III/2	2,5	26	26	30	38	120
Nature Reserve Study	IV/2	2,5	20	20	-	50	90
Forest Studies		7,0	51	51	30	150	282
Forestry Economics	IV/1	4,5	51	34	-	77	162
Forest Selection	II/2	3,5	36	36	30	54	156
Forest Zoology	II/1	2,5	34	17	-	39	90
Basics of Labor Protection	IV/2	2,0	20	20	-	32	72
Mechanization of Forestry Work	II-III/2-1	7,5	70	70	-	130	270
Basics of Hydrotechnical Melioration	II/2	4,0	36	36	-	72	144
Aerospace Techniques in Forestry	IV/1	2,0	17	17	-	38	72
Forest Melioration	III/2	3,0	39	26	-	43	108
Organization of Forestry Production	IV/2	4,5	40	40	-	82	162
Information Technology in Forestry	IV/1	3,5	34	34	-	58	126
Basics of Forest Exploitation	IV/2	2,5	20	30	-	40	90
Forest Taxation	III/1-2	7,0	60	73	30	119	282
Forestry	III- IV/1-2	4,0	39	39	30	66	174
Basics of Biotechnology	II/2	3,0	36	18	-	54	108
Forest Crops	IV/1-2	11,5	107	107	30	200	444
Forest Management	IV/1-2	7,5	64	81	30	125	300
Total		**94**	**888**	**863**	**282**	**1621**	**3654**
Specialty 205 "Forestry", educational level "Master"							
Labor Protection in the Industry	I/2	3,0	14	14	-	62	90
Forest Office Management	I /2	4,0	26	26	-	68	120
Biological Basis of Thinning	II /2	3,0	14	14	-	62	90
Regional Forestry	I /2	4,0	18	26	-	76	120
Forest and Park Farm	II/1	3,0	14	62	-	56	132
Geobotanics	I /1	3,0	16	14	-	60	90
Management of Forests' Productivity	I /1	4,0	28	14	-	78	120
Methodology of Scientific Researches	I /2	3,0	16	14	-	60	90
Information Technology in	I /2	3,0	14	14	-	62	90

Forestry							
World Forestry	I /1	3,0	14	14	-	62	90
Rubber Tapping and Forest Chemistry	I /1	3,0	16	16	-	58	90
Logging	I /2	3,0	14	14	-	62	90
The Basics of Wood Processing	I /1	3,0	16	14	-	60	90
Forest Ecology and Forest Typology	II/1	3,0	22	20	-	48	90
Psychology of Management	II/2	3,0	12	10	-	68	90
Forestry in Radioactive Contaminated areas	I /2	3,0	16	14	-	60	90
Forest Certification	I /2	3,0	14	14	-	62	90
Aerospace Forest Monitoring	I /1	3,0	14	14	-	62	90
Forest Ecosystem Modeling	I /1	3,0	18	28	-	44	90
Forest Certification	I /2	3,0	14	16	-	50	80
Continuous Forest Management	I /1	3,0	16	14	-	60	90
Organization of Non-Timber Forest Use	II/1	3,0	22	20	-	48	90
Professional Terminology	II/1	3,0	12	20	-	58	80
Total		**72**	**380**	**426**	**0**	**1386**	**2192**
Specialty 206 "Landscape Gardening Economy", educational level "Bachelor"							
Basics of Training	I/2	3,0	28	30	60	128	246
Wildlife of Gardens and Parks	II/2	2,5	34	17	-	39	90
Mechanization of landscape gardening work	II-III/2-1	6,0	53	69	30	94	246
Dendrology	II/1	5,0	34	34	30	112	210
Decorative Dendrology	II/2	6,0	54	54	30	108	246
Selection and Genetics of Woody Plants	II/2	3,5	36	36	30	54	156
Basics of Biotechnology	II/4	3,0	36	18	-	54	108
Basics of Art	III/1	3,5	34	34	-	58	126
Decorative Nurseries and Seed Production	III/1	3,5	34	34	-	30	98
Phytopathology of Ornamental Plants	III/1	4	34	34	12	76	156
Fundamentals of Urban Planning	III/1	2,5	36	18	-	36	90
Hydro-Technical Installations of Gardens and Parks	III/2	2,5	36	18	18	36	108
General Floriculture	III/1-2	3,0	34	17	24	57	132
Forestry	III/1-2	4,0	39	39	30	66	174
Industrial Floriculture	III/2	2,0	13	26	-	33	72
Landscape taxation	III/2	2,5	36	18	-	36	90
Grassland and lawns	III/2	3,0	26	26	24	56	132
Entomology of Ornamental Plants	III/2	2,5	26	26	12	38	102
Greening of inhabited Areas	III/1	2,5	26	26	30	38	120
Recreational Forestry	III/2	3,0	26	26	-	56	108
Reforestation and forestation	III/1	2,0	13	26	-	33	72
Landscape Architecture	III-IV/2-1	6,0	60	60	30	96	246
Inventory of Green Plantation	IV/1	3,0	26	26	-	56	108
Economics of Landscape Gardening	IV/1	4,5	51	34	-	77	162

Introduction and Adaptation of Ornamental Plants	IV/1	3,0	17	54		57	128
Basics of Flower Arrangement	IV/1	2,0	-	34	-	38	72
Nature Reserve Study	IV/1	2,5	20	20	-	50	90
Landscape Gardening Construction	IV/1-2	3,5	34	17	30	39	120
Basics of Labor Protection	IV/2	2,0	20	20	-	32	72
Indoor Ornamental Plants	IV/2	3,5	34	34	-	58	126
Urban Ecology and Phytomelioration	IV/2	1,5	20	20	-	24	64
Topiary Art	IV/2	1,5	20	20	30	24	94
Basics of Composition	IV/2	1,5	20	20	-	24	64
Engineering Equipment of Landscape Gardening Objects	IV/2	1,5	10	20	12	24	66
Total		**102,5**	**1020**	**1005**	**432**	**1837**	**4294**
Specialty 206 "Landscape Gardening ", educational level "Master"							
Methodology and Organization of Scientific Researches	I/1	3,0	16	14	-	62	92
Soil and Soil Mixtures	I/1	3,0	28	14	-	62	104
Dendroproject	I/1	3,0	28	14	-	62	104
Computer Technology of Landscape Gardening Objects	I/2	3,0	-	26	-	64	90
Greenhouse	I/2	3,0	26	13	-	64	103
Operation of Landscape Gardening objects	I/2	3,0	26	26	30	38	120
Ornamental Gardening	I/2	3,0	14	26	-	50	90
Forestry and Gardening	II/1	3,0	20	10	-	100	130
Indoor Phytodesign	II/1	4,0	30	10	-	90	130
Reconstruction and Restoration of Landscape Gardening Objects	I/1	4,0	28	28	-	64	120
Reclamation of Disturbed Landscapes	I/2	3,0	14	14	-	62	90
Shaped Variety of Trees and Bushes	I/I	3,0	12	14	-	64	90
Green Farm Planning	I/I	4,0	20	20	-	80	120
Agrotechnics of Green Building	I/2	3,0	12	14	30	64	120
Landscape Design	I/2	3,0	12	14	-	64	90
Modern technologies in Decorative Nursery	I/2	5,0	28	28	-	94	150
Integrated Protection of Ornamental Plants	II/1	5,0	10	20	-	120	150
Park Science	II/1	5,0	10	20	-	120	150
Total		**63**	**334**	**325**	**60**	**1324**	**2043**

Practical classes contribute to the formation of practical skills of future specialists in forestry and landscape gardening, during which the teacher organizes a detailed examination of individual theoretical positions of the academic discipline by students and forms the ability and skills of their practical application by individual fulfillment by the students corresponding tasks. In the process of training specialists for forestry and landscape

gardening , it is very important that students have direct contact with plants, they are able to see and study one or another species. Therefore, along with laboratory and practical classes, training and practical training are of considerable importance for the development of practical skills of forest and landscape gardening specialists.

In order to determine the best students from theoretical and practical training, students of II-IV courses of educational level "Bachelor" and of I-II courses of educational level "Master" participate annually in the II stage of the All-Ukrainian Olympiad in forestry and landscape gardening , which is held among agricultural higher educational institutions of Ukraine. It has become a good tradition to hold All-Ukrainian competitions in forest all-around every year, where students demonstrate their knowledge and skills in planting and pruning trees and bushes, felling and so on in Uman National University of Horticulture.

The second stage of the formation of a model of practical training is the consolidation of skills obtained at practical classes during educational practice. According to the curriculum for the preparation of bachelors, training practices are provided for by the disciplines "Basics of professional training", "Forestry", "Forest Selection", "Forest Crops ", "Forest Management", "Dendrology", "Floriculture", "Grassland and Lawns", "Decorative Seedlings Growing and Seed Growing", "Landscape Gardening Architecture", "Topiary Art", "Landscape Architecture", "Inventory of Landscape Gardening Objects", " Phytopathology of Ornamental Plants", "Entomology of Ornamental Plants", "Forest Phytopathologists", "Forest Entomology", "Forest Inventory", "Forest Science". At the second educational level “Master” educational practices are provided for the disciplines “Operation of landscape gardening objects”," Agricultural engineering of greenery construction”, “Forest-Park Economy”. Detailed methodological guidelines have been developed for conducting educational practice on each discipline (Rogovskiy et al., 2010; Ischuk, 2011; Ischuk, 2013b).

The third stage of the formation of a model of practical skills happens after implementation of individual research tasks for each discipline within the time allotted for independent work of students, calculation and graphic works, course and diploma projects. Students acquire skills in conducting phenological monitoring of plants, in reproducing and growing ornamental plants of in-door type, collecting seeds, herbarium, developing projects, making calculations, and so on.

Students continue to acquire practical skills when writing calculating and graphic works and course projects on the following disciplines: "Decorative Dendrology", "Landscape Architecture", "Landscape Gardening Construction", "Greenery Agricultural Engineering", "Forestry", "Forest Crops", "Forest Management", "Forest Management", " Forest Reclamation", where each student receives a real object for the development of projects and calculations. The tutor of the course prepared guidelines for writing calculation and graphic works and course projects on each discipline (Ischuk 2013; Ischuk, Hahula 2013).

The fourth final stage of the formation of the model of practical training of students occurs through the formation of practical skills in the workplace - while conducting manufacturing practice in the third year of the educational level "Bachelor" and the first course of educational level "Master". Universities collaborate with a broad network of practice bases of public and private property and scientific institutions with which cooperation agreements have been concluded. First of all this is a system of state forestry and agroforestry in Cherkasy, Kiev, Kirovograd, Vinnitsa and Odessa regions, as well as the National Dendrological Park "Sofiyivka", the State Dendrological Park "Alexandria" and the National Botanical Garden named after. N.N. Grishko NAS of Ukraine, Botanical Garden named after Acad. A.V. Fomin of Kiev National University named after Taras Shevchenko, private garden centers “Eva”, “Harmony”, “Edem-Flora”, “Green Country”, “Bee”, private enterprise “Liris”, agrofirm “Rassvet”. Rather often after manufacturing practice specialists are invited to work and are employed in these institutions and organizations. All the questions of manufacturing practice, design of reporting documentation are also detailed in the relevant methodological recommendations (Shlapak et al., 2016). The materials collected by students during manufacturing practice are used for graduation diploma project, the method of implementation of which is also detailed in the methodological recommendations (Shlapak et al., 2018, Rogovskiy et al., 2017).

Thus, a sufficient amount of time is paid for practical training of future specialists in forestry and landscape gardening at the Belotserkovsky National Agrarian University and Uman National University of Horticulture, the main condition for its successful use, in our opinion, is the continuity of this process during laboratory-practical and practical classes, educational and manufacturing practices and course and diploma projects in close cooperation with production.

2. Scientific- Research Work and Development of Creative Abilities

Forestry and landscape gardening specialists are facing so complex tasks put by modern production that their solution requires creative search and research skills. In this regard, a modern specialist should have not only the essential fundamental and expertise knowledge, but also certain skills of creative solution of practical problems, constantly improve their skills, quickly adapt to new conditions. All these skills are formed in the institution of higher education. Among the variety of forms and methods of training, special attention is paid to scientific-research work in the forestry and landscape gardening industry. The right combination of students' educational and research work is one of the main conditions for improvement of the quality of training.

The question of determining the criteria, indicators and assessment levels of students' professional activities was highlighted in the works of Kovalchuk (2016), M. Prigodiya, P. Vasyuchenko (2010). Creativity and creative development were also analyzed by S. Sysoev et al. (2001). Criteria, indicators and levels of development of professional creativity were highlighted by S. Amelina et al. (2015), A. Popova (2006), the works of M. Tkach (2018;

2018b) are devoted to specific issues of teaching and training specialists of landscape gardening, but so far, the question of assessing and controlling the formation of professional creativity, namely, future specialists of the forestry and landscape gardening remain unresolved.

In modern conditions, the scientific- research work of students is transformed from a means of developing the creative abilities of the most successful and gifted students into a system that will improve the quality of training for all specialists with higher education.

Students' research work includes elements of teaching students the basics of research, as well as imparting them certain skills and also performing scientific researches conducted under the guidance of teachers. Consequently, the forms and methods of attracting students to scientific creativity can be divided into scientific- research work included in the educational process and, therefore, included in study hours in accordance with educational and professional programs and curricula (special lecture courses on the fundamentals of scientific research , various studies with elements of research, educational and research work of students), as well as research work performed by students during extracurricular hours . The educational and research work of students is implemented into the schedule of classes and is carried out by each student on a special assignment under the supervision of a research supervisor - assistant professor or professor of the department. At the second educational level “Master”, the curricula of the Uman National University of Horticulture and the Belotserkovsky National Agrarian University one day per week for individual research and development is provided. The main task of the scientific- research work is to teach students the skills of independent scientific work, introduction into the real working conditions in laboratories and in research teams. In the process of performing educational researches, future specialists learn to use devices and equipment, individually conduct experiments, process their results, and apply knowledge in solving specific problems.

All students conduct research on three interrelated levels: experimental, theoretical, and descriptive-generalizing. At the experimental level, they experiment, accumulate facts, analyze them, make generalizations and draw practical conclusions. Experiments on specific objects are called physical. They also use imaginary experiments.

At the theoretical level, knowledge is synthesized, general patterns on the forestry and landscape gardening industry are formed. The theory is a system of generalized knowledge. Therefore, the results of certain experiments are summarized in a certain theory. The criterion for the correctness of a scientific theory is an experiment and a practice. Thus, the theory is used for in-depth reflection of the results of the experiment, in turn, the experiment is the starting material for constructing a theory. However, the theory cannot be reduced to the sum of experimental data; it is a qualitatively new level of knowledge of an object or a certain phenomenon (Kovalchuk, Moiseyev, 2008). Depending on the cognitive or practical purpose, scientific research is provisionally divided into fundamental and applied. The conventionality of such a division is that at certain stages fundamental research can be transferred to applied ones and vice versa.

This shows the linkage of scientific knowledge and practice. Fundamental researches are aimed at studying new phenomena and discovering the laws of nature, expanding knowledge about the world around us. As a result of fundamental research, detailed scientific works are created for usage in a certain sphere. The results of these researches are used to develop new technologies for growing certain ornamental crops as "*ex situ*" and "*in situ*". When new phenomena are studied, fundamental research is often carried out at the border of the known and the unknown, they have the highest degree of uncertainty and therefore require a great strain of mind and heightened intuition from the researcher.

The fundamental research also includes free theoretical research which sure is headed by an eminent scientist and is conducted on the basis of his ideas. The tutor of the problem pre-determines the very theory of the problem. The school of foresters in Uman National University of Horticulture is headed by Doctor of Agricultural Sciences, Professor V. Shlapak, who has guided the defence of more than a dozen Ph.D. dissertations on the problems of forestry, afforestation, introduction in the conditions of the right-bank Forest-Steppe and the Steppe of Ukraine. There is a student troubled group at the Department of Forestry Uman National University of Horticulture under the guidance of prof. Shlapak V.P. that deals with the improvement of reforestation and afforestation in the region.

Phenomena occurring in nature, that is outside the experiment are studied at the descriptive-generalizing level of research. This is an observation of the growth and development of plants depending on the weather, the passage of phenological phases, frost resistance, drought resistance of plants in nature and the like. For such observations experiments are not needed, here the researcher registers and consolidates only those phenomena and forest and landscape gardening objects that exist without an active influence on the change of these phenomena.

Usually experts in the sphere of forestry and landscape gardening are engaged in applied research and development of creative projects. Students present their projects at the annual scientific and practical conferences “Prospects for the Development of Forestry and Landscape Gardening”, “New technologies in Plant Breeding”, which traditionally take place in spring at Uman National University of Horticulture and Belotserkovsky National Agrarian University. Future forestry and landscape gardening specialists participate actively in student seminars and conferences at the National University of Bioresources and Environmental Management, Lviv Forestry University. It was i n 2016,when the first-year student of the educational level “Master” of the Agrobiotechnology Departament of the Belotserkovsky National Agrarian University Daria Ptychnyk became the winner of the All-Ukrainian competition “The Best Student of the Year”, and the project of the reconstruction of the square near the main building of the Belotserkovsky National Agrarian University which she presented (tutor of project Zhikhareva K.V.), took the honorable first place among the student design work of the agricultural higher educational institutions of Ukraine.

Of particular importance are the graduation projects that students of the second master's educational level carry out, a significant amount of which is performed by request of institutions, organizations, enterprises of various forms of ownership. In such projects, students are attached to the formation of landscapes of industrial and residential complexes, highways, create tourist complexes, restore historical sites, in particular palace and park complexes, green cities and villages, develop the introduction process based on scientific collections of botanical gardens and dendroparks, reproduce natural complexes on destroyed, man-made, devastating landscapes and the like.

Increasing the effectiveness of training and ensuring the competitiveness of future professionals is based mainly on new educational solutions, based on the mastery of the capabilities of modern technique and technology. Required material and technical basis has been created, classes have been established for teaching graphic ,courses and diploma projects-all these were done for training students in Uman National University of Horticulture and the Belotserkovsky National Agrarian University .Every year the best masters thesis projects are exhibited at the All-Ukrainian competitions of architectural schools. The use of modern design computer programs ARCHICAD, LEND DESINGER, VISIO, SCHEDULER, OUR GARDENI is very important for the development of creative abilities in the research work of students. They allow to predict and simulate the growth and development of green belt both seasonally and according to the age of ornamental plants.

Thus, research work in conditions of an case-by-case approach to each student develops creative abilities and improves the quality of training of all forestry and landscape gardening specialists.

Conclusion.

The examining of the content and process of training future forestry and parks and horticultural experts through analysis of curricula, educational and professional programs, organizational and methodological support, practices and individual and scientific research work of students showed a concentration on the educational-operational aspect and the enhancing the role of knowledge and their workout in the system of practical training that allows to develop fully the model of practical vocational training by means of normative and variational disciplines of the professional cycle as the educational level "Bachelor" and the educational level "Master".

The experience of practical training of forestry and landscape gardening specialists at Uman National University of Horticulture and Belotserkovsky National Agrarian University shows that only continuous practical training in various forms - classroom laboratory - practical and practical classes, training and manufacturing practices, and individual scientific research work under the teacher's supervision at the objects of forestry and landscape gardening allows to raise the level of the vocational training in a qualitative way and this is a guarantee of their successful employment.

An individual approach to scientific research work contributes to the development of creative abilities, increases the interest and vocational approach of students to the production issues of growing and selecting ornamental plants, designing, building and operating components of plant communities and engineering equipment at forestry and landscape gardening facilities.

However, the analysis carried out does not exhaust the whole completeness of the problem of vocational training for forestry and landscape gardening specialists. It is advisable to move to a dual education system in the context of further improvement of the model of practical training of forestry and landscape gardening experts. According to regulatory documents, dual education supposes that 60-70% of the training time of forestry and landscape gardening specialists simultaneously study and work at workplaces, and only 30-40% of educational time is given to theoretical training in higher education institutions.

It is also necessary in the future to improve significantly the physical facilities of higher education institutions; attracting teachers and students to the professional study of foreign languages will allow them to participate in international educational programs, projects, competitions, internships, and establish cooperation in the sphere of practical training of specialists in universities of the European Union.

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COMMUNICATIVE COMPETENCY IN THE FRAMEWORK OF FUTURE SPECIALIST LANGUAGE PERSONALITY FORMATION

Abstract*. The research is devoted to the problem of communicative competency in the framework of future specialist language personality formation. The first part of the paper describes scientific interpretation of notions "language personality" and "communicative competency of a specialist". The second part features formation of an active individual professional vocabulary of the future specialist. The third part represents the ways of development of professional dialogue skills of the future specialists in the context of foreign language communicative competence formation. The research results can be implemented in the training process of future specialists in translation.*

Introduction.

In the context of market economy, the requirements for the personal and professional qualities of specialists, in particular, their communicative competency, which ensures the successful implementation of professional activities in favor of civil society, are growing. The society requires specialists with a high level of professionalism, who are capable to conduct professional activities in a creative and independent way with orientation to the needs of contemporary information environment. Future professionals should use the acquired knowledge effectively and expediently as well as implement their skills within the scope of successful professional communication.

In response of globalization and integration of Ukraine into European environment (educational, economic, cultural, legal, etc.), the role of communication in various spheres of social life has increased, that focuses on the need for the development of culture of dialogue among future specialists in the process of professional training. Nowadays, in every sphere of society, the skills of dialogical communication are an important factor of specialist's competitiveness. These skills are common ground for communication in professional spheres as well as a professional tool.

Communication competency plays a paramount role in solving social problems as long as the art of constructive dialogue performance is an attributive feature of professional activities in a country with the rule of law. Contemporary realities of the development of society in the context of European integration and globalization processes require special attention to the formation and development of the language personality of a specialist. To some extent, the level of a language personality development influence the effectiveness of professional performances and social roles the specialist fulfils.

Much attention to the essence of the language personality as the basis for the formation and development of future professional is paid in the research works of educators (I. Bekh, A. Bohush, S. Honcharenko, I. Ziaziun, V. Kremen, O. Leoptiev, S. Rubinshtein. V. Semychenko, S. Sysoieva, etc.) and linguists (S. Abramovych, Yu. Karaulov, V. Karasyk, V. Redko, O. Selivanova, O. Solovova, etc.). Theoretical and methodological fundamentals of professional competency formation are discussed in the works of Ukrainian and foreign scientists (B. Ananjjev, L. Vyghotsjkyj, Zh. Dellor, V. Doll, Z. Kalmykova, N. Menchynsjka, L. Mitina, V. Slastjonin, L. Karpova, T. Kovaljova, J. Kullakhan, A. Makarova, Gh. Onkovych, Zh. Perre, O. Polunina, N. Lobanova, S. Rubinshtein, Gh. Khalash, M. Choshanov, etc..). The problem of competency-based approach towards professional training of future specialists was analyzed in research works: O. Bermus, N. Bibik, V. Bolotov, O. Volkova, N. Ghaljejeva, E. Zejer, O. Olejnykova, L. Parashhenko, V. Sjerikov, L. Tarkhan, A. Khutorsjkyj, Je. Carjkova (modernization of education on the base of competency-based approach); I. Zymnja, O. Ovcharuk, O. Pometun (ways of implementation of competency-based approach in foreign countries); E. Zejer, O. Krysan, Ju. Tatur, A. Khutorsjkyj (essence of competencies); O. Lokshyna, M. Savchyn, O. Pashhenko (assessment and monitoring of competencies development).

The process of communicative competency formation was described in research of Ukrainian academicians (S. Doroshenko, Yu. Yemelianov, O. Mudryk, L. Petrovska, etc.) and foreign scholars (L. Bachman, N. Halskova, N. Hez, D. Hymes, A. Holliday, M. Canale, B. Kokkota, O. Leontiev, R. Milrud, V. Nemushyn, Yu. Passov, M. Swain, etc.).

In the framework of scientific research, communicative competence is regarded as the notion of a language personality (I. Zymnja); as the individual quality and a certain state of people's consciousness in a group (Yu. Yemelianov); as the necessary level of the experience formation and interpersonal interaction skills that help to perform successfully according to the personal abilities and social status (T. Volfovska), etc.

The analysis of academic research devoted to above-mentioned problem shows that the theoretical and methodological foundations of the language personality formation are widely covered in the scientific literature, at the same time, the consideration of this phenomenon in the context of pedagogical research needs additional exploration and examination. In spite of the existence of numerous scientific works devoted to the development of communicative competency, in our opinion, there is deficiency of works that analyze specificity of communicative competency formation among future specialists.

1. Scientific interpretation of notions “language personality” and “communicative competency of a specialist”.

At the turn of 20th and 21st centuries, the problematic field of language commination gained popularity among scientists in different spheres that caused the growth of research in the means of communicative influence and it strengthened the exploration of issues related to language personality.

According to reference materials, personality is defined as "a person", in the broadest sense, it is concrete, integral human individuality in the unity of his/her natural social skills; in the narrower, philosophical sense "a person" is an individual as a subject of social activity, whose properties are determined by the specific historical conditions of society [9, p. 243].

There are different philosophical definitions of “personality” in varies works. For instance, the authors of philosophical encyclopedic dictionary understand “personality” as the aspects of inner world of a human that are distinguished by his/her uniqueness and openness and realized in self-knowledge and self-creation of a person as well as objectified in artifacts of culture [39, p. 457]. Personality, thus, is the bearer and speaker of philosophy of life that presents a person as a unique individuality.

A person exists in the language, manifests himself/herself in the language, and establishes communication with other people. The effectiveness of language and communication depends on the language culture and the level of speech skills development as well as personal skills. Consequently, every human being is a language personality. This concept reflects the essence of the term “personality”, but it covers such a facet as the ability to think and communicate with means of his/her native or foreign language.

Personality is associated with a language; as a recognized psycholinguist O. Leoptiev notes, “… a language is, first and foremost, a language of an individual” [29, p. 282]. Therefore, without a language there is no personality, as any language cannot exist devoid of a personality. Language is a kind of guide to the world on the way to oneself [lbid.]. A person can realize and understand himself/ herself and the world, and, accordingly, can be actualized only through a language, due to the ability to communicate, to master a huge number of verbal and non-verbal signs.

According to an academician V. Karasyk, a language personality is an individual who exists in a language environment, where there are norms and stereotypes that are established in a language in forms of linguistic units and contexts of texts [23, p. 8]. A language personality is a medium of linguistic consciousness that is articulated through verbal behavior. In psychological studies, a language personality is defined as “a form of existence of individual, cognitive consciousness of an intelligent person, as a person who can communicate and is a social being” (I. Zymnja [19, p. 23]). According to L. Zasiekina, language personality can be defined as a set of cognitive, emotional and motivational qualities that provide the linguistic competence of a person as a medium of national and cultural environment [17, p. 83].

Language culture begins with self-perception of language identity of the speaker. It originates and develops when native speakers who can use literary language care about their oral and written language performance, they care about perception of their communicative activities in various social environments as well as in the context of other languages [28, p. 9].

The diverse defining of term "competence" leads to profound analyses of its essence and distinguishing its attributive features in academic perception. According to O. Ovcharuk, competence is as an integrated characteristic of personality quality, a productive unit formed through experience, knowledge, skills, attitudes, behavioral reactions [26, p. 93]. O. Pometun defines competence as a specially structured (organized) set of knowledge, skills and attitudes that are acquired during the learning process [ibid, p. 18]. Ju. Tatur understands competence as the ability of a person (specialist) to realize his human potential for professional activity [40, p. 15]. In works of an academician I. Zymnja, competence is based on knowledge, intellectually and personally predetermined social and professional life human [18, p. 13]. B. Kenzhebekov interprets competence as the readiness and ability of the individual to use theoretical knowledge and practical experience to solve individual problems [24]. In the research works of S. Bodnar competence is a general ability and readiness for productive activity, a productive unit formed through experience, knowledge, skills, attitudes, behavioral reactions [7, p. 99]. According to O. Bergmus, the above-mentioned term is the ability to solve problems and readiness for his professional role in one or another field of activity [5].

The purpose of training specialists for any sphere is formation among future professional competencies that they will imply in the future. Communicative competence is skills, ability to solve communication tasks, actualize the goals of communication using a language [53].

The term "competency" is wider than the category "competence". Competency is the sum of skills and abilities needed for effective professional activities – the ability to analyze, the ability to foresee the consequences of professional activities and the ability to use information [36]. This term is also defines as awareness of abilities and skills to perform certain professional functions [30, c. 31]. The frame of competency is the knowledge, cognitive skills, practical skills, emotions, values, ethics and motivation [34].

According to I. Ziaziun, competency is an individual characteristic that exist in numerous forms such as the high level of skills, the modus of personal self-realization (habit, way of life, devotion). It is defined as a summary of the individual's self-development, a form of manifestation of abilities [21, p. 17].

Professional competence is determined by the level of vocational education, experience and individual abilities of a person, his/her motivated aspirations for continuous self-education and self-improvement, creative and responsible attitude to the case [10, p. 4].

For instance, there is not a well-defined notion of “professional competence of an interpreter”. It can be defined as a component of the personality features of a specialist in translation, which consists of linguistic and psychological competence as well as information competence [12, p. 33]. The professional competence of the translator is characterized, firstly, as the sum of the knowledge, skills, abilities and personal characteristics required by the translator to successfully performance of their professional activities [25]. In general, the professional competence of a translator is defined as a broad, multifaceted, integral concept.

There are different approaches to interpreting the communicative competence in the scientific world. On the one hand, this phenomenon is defined as a certain level of personal and professional experience in interacting with others used by an individual in order to function successfully within the professional community and society in the framework of his abilities and social status (M. Vasilik) [35, 59]).

On the other hand, it can be described as human ability to organize interpersonal space in the process of initiative and active communication with people (Yu. Yemelianov [14]). Some scholars understand it as a system of internal resources of effective interaction: communication positions, roles of stereotypes, settings, knowledge, abilities, skills (I.Cherezova [46]). This term is also defined as a complex ability of a person whose content is determined by the activity of a specialist and the functionality of language and speech [35, 59]. A wildly recognized definition of communicative competence is the ability of a person to communicate and communication is associated with a complex multicomponent activity (A. Bogush, N. Galskova, O. Petrashchuk, L. Bachman, A. Nolldiou). According to Yu. Zhukov, it is as a system of internal resources necessary for effective communicative action in a definite range of situations of interpersonal interaction [15]. Communicative competence includes language skills, interaction with people, teamwork skills, and possession of various social roles (A. Khutorsky [44]).

In general the term, term “communicative competence” means the sum of knowledge about norms and rules of conducting communication acts – dialogues, debates, negotiations [6]. For the first time the term “communicative competence” appears in the discourse of social psychology and is associated with ability to create and maintain effective contacts among people.

According to V. Kunitsina, communicative competence is the possession of complex communicative skills and abilities, the formation of adequate skills in new social structures, knowledge of cultural norms and restrictions in communication, knowledge of customs, traditions, etiquette in the field of communication, educatedness, orientation in communicative means, inherent in the national mentality that is expressed within a particular profession [28].

As I. Chebotareva mentions, competence is one of the main components of professional readiness, which includes knowledge of the ways of purposeful use of language means for solving communication problems; high level of native and foreign languages awareness; possession of communication culture, knowledge of national culture, mentality, knowledge of information and computer technologies, personal readiness, which ensures the cooperation and interaction of the staff [45].

Foreign-language communicative competence is an integrative entity of a person with a complex structure and acts as interaction and interpenetration of linguistic, social, cultural, and communicative competence, their formation level that promotes effective foreign language, and therefore interlinguas, intercultural and interpersonal communication.[3, c. 3].

Possession of social norms in communication involves not only knowledge of the values of units of lexical, word-building, syntactic levels of the language system, but also the knowledge of text norms (methods of dialogue of the language, the possibilities of introducing aphorisms, proverbs and sentences, taking into account the reactions of the interlocutor, etc.).

As an example, we can consider in more detail the communicative competence of a translator, in which we distinguish: the knowledge, skills and abilities necessary for the implementation of all types of translation (written, oral, sequential, synchronous) of various types of texts: scientific and technical, official-business, newspaper-journalistic, legal, economic, scientific-technical, artistic, medical, etc. The ultimate goal of the translators is to achieve their understanding of the people of their translation. The translator needs to have a set of language skills and professional skills that are not directly related to the translation work: independent texts writing (not only correspondence or protocols, but also technical, scientific, popular, media), editing texts, the processing of machine translation, advice not only on language issues, but also on regional and intercultural aspects, and so on. Therefore, the professional training of future translators should be guided by the specifics of the chosen specialization of translation activities. Formation of the basic component of translation competence involves enriching the students with the knowledge of the theoretical and applied nature and forming on their basis (in the course of performing practical tasks) the abilities necessary to perform all possible types of translations.

According to D.Kiraly, translation competence involves joining new communities, which area groups of educated users of several languages, who are aware o specialized technical fields [52, p. 107].

The competency of interpreter are formed in the process studying the following professional oriented subjects: “Theory and practice of translation”, “Practice of interpreting or translation”, “Communicative strategies”, “International communication”, “Comparative lexicology”, “Translation of technical and scientific literature”, “Comparative stylistic”, etc.

The dominant role belongs to the fundamental linguistic preparation (as the base of future interpreters' training) and the formation of profession-oriented competencies: semantic (systematic knowledge, skills, personal qualities); textual (ability to reproduce a text, as well as distinguish types, genres and styles of a text); interpretative (finding the contextual meaning of language units and their transformation). The process of professional language personality formation of an interpreter is undoubtedly influenced by the study of the following disciplines: "First foreign language", "Second foreign language", "Ukrainian language", "Linguistic and cultural studies of countries of the first foreign language", "Linguistic and cultural studies of countries of the second foreign language", etc. Of particular importance for the development of language personality is the study of courses such as "Ukrainian language for professional orientation", "Modern Ukrainian literature", "Speaking skills of a translator", "Modern Ukrainian language (practical stylistics)", "Fundamentals of the language communication theory and culture of Ukrainian language". The formation of professional competences (in the process of studying native and foreign languages) promotes the formation of primary skills in translation.

In the process of the future translator's instruction, students should be trained to be participants of multilingual communication, to establish contacts with customers, to be engaged into a dialogue, to take the initiative in finding customers, and distribute offers about their services. Therefore, the important competence, which is needed to be created among the students of the "Translation" specialty, is creative thinking, high level of verbal intelligence, and the abilities to interpret.

In addition to acquiring linguistic and translation competencies by the students, it is extremely important to understand the tasks of a translator and the ultimate goal of the translation, to develop the ability to identify and analyze linguistic and extra-linguistic factors that help to achieve translation equivalence. The future translator needs to learn how to translate the text in such a way, that it will correctly transmit the content to the recipients. The translator must be able to reproduce content accurately. However, this can be achieved by taking into account the combination of factors of the communicative situation, cultural aspects and, most importantly, the preservation of the communicative pragmatic intention of the original narrator.

Translation tasks and simulated situations play an important role in the development of linguistic competences. The main aim of such tasks is to develop the skills of contextual guessing; the skills grammatical structure transformation; the skills of content restructuring and paraphrasing; the skills of synonymous and antonymic usage, the skills of prediction of the situation (completion of unfinished statement); the skills of shortening and keeping in mind basic information (proper names, dates, figures), etc.

According to significant changes in traditional notions about translator's activities, the complication of the translator's professional model and the emergence of new specialties in translation, in the process of training it is necessary develop new literacies and qualities

of an interpreter. An interpreter in contemporary working environment should master the following linguistic abilities (the ability to analyze, to edit a text, to adhere to the time limit, to feel the language characteristic of video information); professional abilities (the ability to organize quality of translations, to work under stressful conditions) and team working abilities (to cooperate with specialists in other fields and at different levels of subordination, to make decisions quickly and assume responsibility).

It is necessary to teach future interpreters to develop the ability to gain background knowledge, to master their skills in implementation of basic translation strategies and text creation strategies in their native and target languages, to develop their capacity in independent work with terminology. The professional work of an interpreter should provide communication between the participants, who use different language codes. The participants of communication in framework of translation often do not even come into direct contact with each other, the only medium for their communication is the text created by an interpreter. Future specialists in translation must have the ability to think logically, analyze and be ready to self-reflection and criticism.

Thus, the formation of translation competence for future translators should be aimed at the advanced awareness of the target languages and theory and methods of translation. The students should develop the ability to take translation decisions, to understand their role as an intercultural mediator in the communicational process. During the instruction of future specialists in interpreting, much attention should be paid to the formation of translational skills and awareness of the value of the translator's profession; as well as development of the language personality of a future translator.

In our opinion, the communicative competence of the future specialist is a complex integrative attribute of the individual that combines language, linguistic, social and cultural competence, and the ability to carry out communicative activities within the framework of professional needs in accordance with social and cultural and linguistic standards. The communicative competence of a specialist is understood as a socially significant indicator of the level of communicative knowledge, language abilities as well as skills and ability to carry out professional dialogue, to perceive, to understand, to master the content of information, to establish feedback with the interlocutor, to solve specific tasks in professional sphere.

The communicative competence maturity is determined by the following indicators: the ability to understand phonetic and grammatical features of the target languages; the expedient use of language and communicative structures; the desire to improve their own language; the availability of cognitive and communicative needs; the effectiveness of the linguistic and language knowledge; the observance of phonetic, lexical, grammatical and stylistic norms in written and spoken language, the desire and ability to achieve the desired communicative goals.

Consequently, the communicative competence of the future specialists is one of the components of thier professionalism, a peculiar criterion of educatedness and general culture. The process of communicative competence formation among future professionals is not limited to the pedagogical impact on the identity. It covers the ethically meaningful activities of specialists in society. The main task of the teacher is to make this process purposeful and direct the self-development of the student's personality to constant self-improvement. The formation of communicative competence of the future specialists is a continuous, purposeful process of updating their language abilities, stimulating readiness for constructive dialogue in the process of solving professional problems. The professional culture of communication and the communicative competence of the future specialists depend on their level of professionalism, the quality of their professional functions.

2. The formation of an active individual professional vocabulary of the future specialist.

The formation of a culture of professional communication among students in high educational institutions is a part of the process of developing their professionalism as the future specialists. Under the conditions of Ukraine's integration into the European educational space the role of a communicative specialist individuality is growing, the effectiveness and results of which often depends on the level of proficiency in professional vocabulary.

Despite the considerable interest of scientists to the culture of professional communication, the peculiarities of professional activity and the professional training of specialists, the problem of the formation of the individual vocabulary of the professional vocabulary of the future specialist (in the theoretical and practical aspects) remains poorly investigated. The topicality of the problem is amplified not only by the social request of competent, sociable professionals with a high level of professionalism, but also by the need for the student himself to enrich the lexical store, the formation of language culture and the creative self-development of individuality.

The problem of the development of communicative abilities and the professional communication of students to a certain extent is reflected in the works of S. Amelina, M. Bakhtin, V. Berkova, Vvedensjka, N. Volkova, L. Ghubersjkyj, M. Zubkova, V. Kostjuk, Gh. Meljnyk, A. Mudryk, L. Palamar, A. Panfilova, M. Pentyljuk, L. Petrovsjka, L. Suprun, N. Tocjka and others. The importance of enriching the active vocabulary is emphasized by well-known scientists-teachers: N. Voskresensjka, A. Svashenko, S. Doroshenko, N. Kovalj, O. Ponomariv, M. Rusanivsjkyj, O. Khoroshkovsjka and others.

Scientists consider the "level of proficiency in the professional meta-language (terminology systems, phraseology, composition and genre forms of text formation)" [31, p. 2] as the highest level of formation of the linguistic personality and the expression of the culture of communication,.

Each specialty presents its own, special requirements to the culture of professional communication and active vocabulary of the terminology of the experts' vocabulary in the relevant professional field of activity.

As N. Tocjka observes, students must have a certain active lexical reserve of professional terminology for the free possession of oral and written forms of professional communication [42, p. 62].

The ability of a word to call a notion makes it possible to use a relatively small amount of words in the course of communication. Awareness of the inextricable connection of the word and concept is a guarantee of a successful profound mastery of the language of your specialty, the ability to accurately express thoughts, finding the appropriate vocabulary for this. Accordingly, conceptuality as the main feature of scientific professional communication is fixed and expressed in words as terms.

As experience confirms, future specialists have knowledge of general language norms, but almost do not have an active vocabulary of professional communication. During the study of special disciplines he receives not only the features of the future specialty, but also in part with his language support. This is facilitated by the reading of textbooks, articles on professional periodicals, listening to lectures, preparation for practical classes, independent work of students.

The understanding of scientific text begins with the mastery of the terminological vocabulary, which organizes the linguistic structure of the scientific text. It represents the basis of the message; it greatly affects the formation of the information basis of the statement, promotes a conscious learning of professional disciplines and increases the efficiency of communication in further professional activities, which requires the use of the Ukrainian language in the manufacturing sphere [8].

The primary role in the individual active vocabulary belongs to words and concepts. The word materializes the concept and forms it, and thus makes the word accessible for perception and assimilation [32]. The ability of a word to call a concept makes it possible, in the course of communication, to use a relatively small amount of words. Awareness of the inextricable connection of the word and concept is a guarantee to a successful profound mastery of the language of your specialty, the ability to accurately express thoughts, finding the appropriate vocabulary for this.

Conceptuality, as the main feature of scientific professional communication, is fixed and expressed in word-terms, accordingly.

Enriching the student's individual vocabulary is the assimilation of new words that have been previously unknown and not used in the language, as well as new meanings of the words, which have already been used in their vocabulary. Work on studying vocabulary is aimed at enriching the active vocabulary, the development of coherent Language, developing skills of conscious mastering of new words, clarifying the meaning and scope of the use of words and concepts.

The study of new concepts consists of: a) enriching the vocabulary, that is, the assimilation of new words or new meanings of known words; b) refinement of the dictionary, that is, the introduction of individual words into the context, the comparison of the close or opposite of the meaning of words, the assimilation of multi valued and emotionally colored words; c) the dictionary activation, that is, transferring as many words as possible to the passive vocabulary (the student knows the meaning of the word, but seldom or does not use them at all) into the active; d) elimination of non-literary words: dialectic, jargon, spatial, etc. [13, p. 134].

The task of practical mastery of vocational vocabulary requires the search of ways to improve a methodology for developing language skills and to emphasize the organization of linguistic material.

In the process of communication experience students often have complications regarding the variation in professional vocabulary that is why their expressions are at a low level in the language culture of professional communication.

Future specialists must learn to have a specific vocational terminology, which is primarily determined by a large number of terms that actively serve the field of professional activities of the future specialists in a particular field.

The effectiveness of the acquisition of professional vocabulary and terminology by students depends on the organizational and pedagogical conditions:

1) the creation of a professionally oriented communicative environment in a establishment of higher education;

2) considering the communicative needs of the professional orientation of future specialists during the selection of terms for active learning;

3) the selection of such methods and methods of training that will promote the enrichment of the active vocabulary of students by professional terms;

4) the development of a system of exercises aimed at the gradual, conscious and profound learning by the students of branch terminology units;

5) ensuring the teaching of scientific terminology by appropriate methodological developments (making a minimal vocabulary of the most common terms in the profession, which students acquire; the selection of a didactic material for professional orientation, etc.);

6) organization of close interaction of the educational environment with the professional.

Working on the professional vocabulary of students it is advisable to be guided by the following basic provisions:

1) work on the vocabulary has a great educational and educational value for the formation of the personality of the future specialist, to master the skills necessary for further professional activity;

2) the content of the vocabulary is the explanation of new, incomprehensible words for the students, analysis and clarification of the meanings already known to them words, acquaintance of the future professionals with the lexical variety of the professional language and its stylistic capabilities;

3) the analysis of the meanings of words should be mainly conducted from the use of the word in modern business language and in a particular industry;

4) it is a systematic, purposeful, well-organized work in order to develop an individual active professional vocabulary of future specialists.

Enrichment of the vocabulary of future specialists should take place while studying all disciplines, but the activation of the already well-known vocabulary and terminology will be achieved only with the help of various exercises at the lessons of the "Ukrainian language for professional communication". The effectiveness of this work largely depends on the consideration of links of systems that characterize vocabulary and terminology. It is important for words to be perceived and assimilated by future specialists not in isolation from each other, but in certain complexes. This should be taken into account in the texts of exercises in which the material should be presented on the basis of semantic, lexical-grammatical, word-building and stylistic features.

In the process of mastering vocational vocabulary and terminology, it is effective to perform various tasks, developed on the basis of professional texts, the content of which is the allocation of terms on certain topics and the compilation of sentences and texts on the given topics. Practical tasks in language should be directed to:

- the enrichment of the vocabulary (professionalism, phraseology, terms, constant expressions of official-business style);
- the assimilation of grammatical forms and their practical application;
- a clear structuring of dialogic communication;
- the construction of a logical, consistent and argued statement;
- the assimilation of language means of argumentation of own position;
- mastering the standards of language etiquette.

The educational discipline "Organization of the culture of communication" serves the development of special knowledge and the formation of professional communication skills. The discipline is based on the concept of organizational behavior and interpersonal communication skills.

It is effective to conduct disputes in dialogical situations. During disputes it is worth paying attention to the fact that, on the one hand, there was no forced silence, and on the other, there was no a hasty prompting of participants to a certain opinion or conclusion by a leader, who was correct in his opinion. At the end of the debate, the teacher sums up, notes the ideas or opinions that have been expressed, and separately emphasizes the decision, which the participants of this process make. This type of work will enrich the active professional vocabulary of the future professionals.

In order to form extra-linguistic means that directly affect the culture of communication of future specialists, it is necessary to introduce training exercises on language technology in practical classes in the "Ukrainian language for professional communication". With the help of training exercises the students will improve language technology, which involves mastering the phonation breathing, voice, diction and mastering the basic qualities of their professional voice (loudness, sonority, ease, adaptability, endurance, and suggestibility).

Forming an individual vocabulary of an active professional vocabulary, future professionals must enter a professional vocabulary that will significantly increase their vocabulary and become an important basis for professional communication in the future. The active vocabulary is characterized by a well-developed system, which ensures the fulfillment of the most important linguistic function such as communicative one. And, as a rule, these words are stylistically neutral, that is, used in most styles of Language. This part of the vocabulary, which is understood by all carriers of the language, has no shades of outdated or unusual novelty.

The professional vocabulary is being prepared at classes and during independent work. Students must refer to explanatory dictionaries, reference books, academic literature, professional journals, scientific articles, the Internet resources, etc. Students should include terms and terminology, abbreviations and abbreviations that will complement the vocabulary and develop future professional skills in professional communication into their professional vocabulary.

Thus, enriching the active vocabulary with common vocabulary during lectures, practical classes, independent and individual work of students, compiling a semantic vocabulary, performing various tasks and exercises will ensure the formation of an active professional vocabulary taking into account the individual characteristics of future specialists.

To the main characteristics of expressive Language, scientists enlist: breathing, voice, diction (pronunciation), intonation (tone), pace, etc. [2, p. 164]. And only the proper mastering of each component of broadcasting technology can guarantee the high level of professional Language culture.

It is necessary to apply monologue and dialogical forms of Language activity of students in the educational process and extra curriculum activity. The quality of the formation of the Language culture depends not only on the use of a certain amount of scientific and professional information, but also on the student's creative activity and possibilities of its mastering, the teacher's emotions, his ability to systematically involve students in work, to absorb Language knowledge and skills not only in classes, but also in the process of independent work [31].

3. The development of skills of professional dialogue of the future specialists in the context of formation of foreign language communicative competence

Scientific views on the formation of a culture of professional communication are reflected in the works of S. Amelina, L. Anpiloghova, V. Berkova, L. Vvedensjka, M. Zarva, T. Kolbina, V. Kostjuk, L. Petrovsjka, A. Ryvina, Gh. Saghach, P. Sopera, L. Suprun, D. Chubata, O. Shcherbakova and others.

In the field of scientific research, there are two views on the process of communication: communication is considered to be business activity according to the first one, if its defining content is socially significant mutual activity, in accordance with the second one it is an oral contact between the interlocutors who have the necessary powers for him and set the task solve specific problems.

In general in the scientific world there are up to 100 definitions of the concept of "communication", in particular, communication is interpreted as: communicative interaction, aimed at establishing a favorable psychological climate, psychological optimization of activities and relationships (V. Kan-Kalyk, I. Kon, K. Rodzhers); a special type of activity that occurs through language or slang, facial expressions, poses, body movements, gestures, images, symbols, sound signals, symbols (V. Davydov, D. Eljkonin); an independent and specific form of personality activity is a prerequisite for the association of people for any mutual activity; the most important medium of spiritual, social and personal manifestation of man is a continuous process of interaction between people, man with himself and the world; in this sense, it is a factor in the development of personality (N. Volkova), etc.

Communication is defined as a set of relationships and interactions of individuals, groups, communities, during which there is an exchange of information, experience, skills, skills and performance. Contact is established between people during business communication, if they speak "in one language" and aspire to productive cooperation [43, p. 278].

Professional communication is a special form of interaction of people in the process of a certain type of activity, which creates conditions for productive cooperation of people in achieving a common goal. Professional communication is a specific kind and a necessary condition for the activity of a specialist. Professional communication is the process of organizing mutual understanding, achieving optimal interaction in professionally directed communication within the professional activity of the participants.

The purpose of communication, which emphasizes the communicative process, which involves not less than two subjects: the one, who speaks (the addresser) and the listener (the addressee); relationship with other people, achievement of a certain understanding, decision of business.

In general the culture of communication of an individual involves the assimilation of certain skills, without which full and high quality communication is impossible.

You need to be able not only to clearly formulate and express your own opinion, but also to perceive the views of the interlocutor, to be able to hear him. The culture of communication is an integral part of the general culture of a specialist. It has established norms of communication and its individual character, which manifests itself the ways of communication chosen by a specialist in certain business situations with respect to specific people or a particular business.

According to scientists (T. Chmut, Gh. ChajkaT.), the professional culture is the correspondence of behavior, Language, listening to the language in professional activities, generally accepted norms and principles, especially moral, and requirements for a particular profession [47, p. 52].

Nowadays the highest level of formation of the linguistic identity and the expression of culture of communication, scientists consider "the level of proficiency in the special meta-language (terminology systems, phraseology, composition and genre forms of text formation)" [31, p. 2]. According to N. Tocjka the future specialists should have some active vocabulary of professional terminology for fluent oral and written forms of professional communication [42, p. 62].

The notion of "communication" in science is defined as "certain activities, determined by a system of socially significant norms and assessments, patterns and rules of communication, adopted in this society" [22, p. 2], as "due to the situation and socio-psychological peculiarities of communicators, the process of establishing and maintaining contacts between members of a particular social group or society as a whole is based on the spiritual, professional or other unity of communication participants, which takes place in the form of interrelated intellectual and intellectual and emotional voluntary acts, mediated by the language and discrete in time and space, that is, in the form of acts of Language, acts of paralinguistic character and psycho-physical influence, acts of perception and understanding ... "[6, p. 22].

Communicative competence is determined by skills and practical skills of interaction with people (dialogue, conflict resolution or prevention at different stages, self-regulation, understanding non-verbal communication language, etc.). This is the person's ability to communicate and the ability to listen to a speaker. In addition to communicability communicative properties include the ability to properly organize communication and the ability to persuade people, to influence them.

According to American psycholinguist G. Clark the failure of linguistic communication may be due to the fact that: the recipient did not receive a message; the recipient did not accept the received message; the recipient did not understand the message received; the addressee does not share the views of the addressee on the implementation of a particular situation [49, p. 247].

Misunderstanding between communicants does not always lead to unsuccessful communication. In this regard, the complete communicative failure and communicative complication are distinguished. Communicative complications can be neutralized by additional Language actions (rehearsing, clarifying, explaining) that contribute to the restoration of the normal development of discourse.

Dialogue is a complex process of establishing and developing contacts between people, generated by the needs of their mutual activities. They are the most important social needs of a human. Social understanding of communication is one of the notions of social culture [27, p. 422].

In the scientific world, the dialogue is interpreted as the arbitrary interaction of structures characterized by activity, subjectivity, and own logic of development (S. Bibler, Gh. Bush, M. Jaroshevsjkyj); as a communication of communicants (M. Ghlushenko) as a form of subject-subjective interaction (Je. Shyjanova), as a way of identityty development (O. Bochkareva, I. Zalyghina, L. Orjeshkina, Gh. Stoljarov), etc.

Dialogue is a "logical and communicative process of people's interaction by means of expression of their semantic positions" [4, p. 4] and "the cheapest and the most effective form of information exchange" according to Berkova's definition [4, p. 5]. It is a "meeting of various subjective worlds of different consciousnesses associated with empathy in relation to a common object" [ibid., P. 14].

So dialogue is a dialectical path to the truth. Learning the ability to conduct a dialogue means learning the dialectical thinking.

At the moment of dialogue the statements of its participants become a sociological category, because the dialogue is the consideration of views and ideas of participants in the social process. The role of dialogue "is particularly increasing during the period of democratization of society. Our future largely depends on the ability to organize a productive dialogue in the most diverse spheres of human activity, since there is no alternative to dialogue as a way of interaction between people "[4, p. 3].

Dialogue communication is a form based on prior internal acceptance of each other as values and it is an admissible orientation to the individual uniqueness of each identity [37, p. 123].

One of main tasks of professional training of the future specialist is the development of professional communicational culture in the process of pedagogical interaction and also students' "systems of knowledge, skills and skills of adequate behavior in various situations of communication" [38, p. 171].

Using a professionally oriented foreign language, the translation specialist uses general and communicative language competencies. The communicative language competence of the translator's personality is realized in the performance of various types of Language activity, namely: perception, awareness, reproduction (oral or written).

Using a professionally oriented foreign language, the translation specialist uses general and communicative language competencies. The communicative language competence of the translator's personality is realized in the performance of various types of Language activity, namely: perception, awareness, reproduction (oral or written ones).

In general communicative Language competence consists of certain components: linguistic (lexical, phonological, syntactic knowledge and skills and other parameters of the language as a system), sociolinguistic (social and cultural terms of language use, social convention, such as: rules of courtesy, the norms governing the relationship between generations, gender, classes) and pragmatic (functional use of linguistic means).

It is difficult to overestimate the role of dialogic relations (dialogue theory) under the present conditions of the existence of society, since its purpose is to "reveal the laws and methodological means of purposeful interaction of people, to find effective ways to realize their creative potential. To master the dialogue is the urgent task of every leader, scientist, teacher, doctor, lawyer, journalist, cultural human in general "[3, p. 137].

Dialogue is a universal means of interacting people. His role is especially increasing during the period of democratization of society. Our future depends largely on the ability to organize a productive dialogue in the most diverse spheres of human activity, since there is no alternative to dialogue as a way of interacting with people [ibid., P. 3]. The development of skills of professional dialogue should be an integral part of the professional training of future translators.

In any activity in the language process it is impossible, of course, to avoid mistakes, but they can be minimized, having mastered the theoretical and methodological basis of the culture of dialogue, knowing the basic requirements for the construction of dialogical language in the process of professional communication. Communication is a certain level of personal and professional experience of interacting with others that is needed by the individuality in order to successfully operate within the professional community and society, within the limits of his abilities and social status [35].

Nowadays in all spheres of life, the possession of dialogue is essential, since dialogue has become the basis of human understanding. The key to a constructive dialogue is the recognition of the equality of all partners in dialogical relationships and the equal right to take account of their interests, proposals and wishes; the principles of humanism and democracy in activity and in dialogical relations; partner interaction in the dialogue of all parties and perception of the partner as a desired and needed interlocutor.

The art of dialogical communication, as the most important criterion of intersocial abilities, is one of the most important professional features of a modern specialist: the ability to organize a conversation, directing it to the proper channel, creates the necessary conditions for dialogue, a means of "further intensification of social progress" [4, p. 5], which is particularly relevant under the conditions of Ukraine's integration into the European space.

The problem of the formation of the communicative personality of the future specialist in the process of vocational training is viewed under the conditions of informational and communicational transformations, which continue to occur in all spheres of human life. The use of innovative techniques and technologies in the educational process stimulates the students' representations about the regular communication.

According to S. Amelina's point of view a person-oriented approach, which involves taking into account the needs, interests and abilities of each student, is of paramount importance in the formation of the professional communicational culture of the future specialists; recognition of his self-estimation as an active bearer of the subjective experience of professional communication; taking into account this experience, creating the educational process [1]. The communicative competence adequately and fully reflects the simulative communication of the personality in a certain professional team, with a specific person and it contributes the implementation of all functions of Language.

Replenishment of the future specialists' vocabulary should take place, while studying all disciplines; the activation of already well-known vocabulary and terminology should be achieved through various exercises at classes in native and foreign languages. During the acquisition of professional vocabulary and terminology it is effective to perform various tasks developed on the basis of professional texts, the content of which is to distinguish terms from certain topics and to compile sentences and texts on topics.

In the process of professional training of the future specialist it is necessary to teach them to create a dialogue, to become a participant in multilingual communication, to establish contacts with customers, to take the initiative in finding customers, to distribute offers about their services and to develop creative thinking, high level of verbal intelligence and the ability to interpret. Special attention should be paid the development of all mentioned above during the trainings

It is important to remember that the correctness of interpretation does not yet indicate the proper level of language. You can speak or write correctly enough, but too monotonous. Such a language lacks a creative approach, which is achieved by skilful and expedient use of words of different styles, various syntactic constructions, as well as, in oral language – the variety of intonations [20, p. 56]. Recognizing the equality of all partners in the dialogue and equal rights of all in order to ensure that their interests are taken into account, proposals are considered in decision-making. It is the starting point for normal dialogical relationships. They must be permeated with humanism and democracy in their deep, modern sense of these principles of relationships and activities; dialogical relationships arise under the condition of partnership interaction in the dialogue of all parties and perception of the partner as a desired interlocutor.

It is necessary to introduce training sessions on the Ukrainian language for professional training in the field of language technology for the formation of extra-linguistic means that directly affect the culture of communication of the future specialists.

The students will improve Language technology with the help of training exercises, which involves mastering the phonation breath, voice, diction and mastering the basic qualities of their professional voice (loudness, sonority, ease, noise resistance, adaptability, endurance, and suggestibility). Language techniques are skills, the ability to implement a language in a particular language situation so that it performs a heuristic (intellectual), emotional and aesthetic, inductive impression on the listener [2, p. 164]. Today in Pedagogy a system of exercises on language technology is developed. It is basically relies on the experience of theater pedagogy (the system of K. Stanislavsky), which is considered as a complex of skills in language, the creation of a voice and diction, and it allows the listener to convey the richness of the content of the necessary information. A significant role in the training of the future professionals was given to the basic characteristics of the voice. Voice is the most important element of language technology and it plays an important role in the process of communication of future professionals. Voice is stimulated by the intellect of the speaker, his emotions and it will depend on certain characteristics.

1. The sound of voice (sonority, volume) does not depend on the efforts that lead to muscle tension, but the activity of the vocal organs, the ability to use the cavity of the voice correctly. The future professionals need to choose average volume, do not speak quietly and never resort to increased volume or cry.

2. Speech rate should be lively, but not fast. Lively manner of speaking, fast pace of speech testify to the impulsiveness of the interlocutor, his self-confidence; calm, slow manner points to impenetrability, prudence; noticeable fluctuations in the tempo of speech suggest a lack of equilibrium, uncertainty, and easy excitability of a person.

3. The articulation is a clear pronunciation of words, syllables and sounds. It is professionally necessary in speech, as it promotes the correct perception of speech by the interlocutor.

4. The sound of voice (flight) is the ability of voice to wistand against the background of other sounds. The future professionals should regulate the sound of voice, remembering that a high voice is inherented by a person, whose thinking and speech are largely intellectual products; low voice indicates that thinking and speech are accompanied by increased emotionality that they are natural, not artificial; high piercing voice is a sign of fear and excitement; low tone of voice is relaxation, calm.

5. The range of the voice is its volume. During the speech, it is not necessary to narrow the range of voice, because it leads to monotony, which reduces the perception of information, weakens the influence of speech.

Considerable attention should be paid to the pauses that may be caused by various reasons, namely the desire to add additional stress to the following words; to think about further actions; to give the interlocutor the opportunity to speak; to make pauses in a difficult situation during speech, due to the expectation that the interlocutor will speak and take off the tension and to make tactical pauses on the basis of what the word partner will take, but for other reasons [16, p. 199-201].

Work on voice should consist of finding one's natural free voice under the stratification of the habits of sound, which arises easily, freely, without muscular effort, and is as organic as possible [11, p. 44].

Conclusion.

In order to improve speech skills, one must understand the essence of speech and language as a means of communication, knowledge of the peculiarities of the perception of oral speech. Therefore, the teaching of the basics of speech communication must be given special attention, when conducting non-traditional lectures, namely, such as lecture-dialogue, problem lecture, and lecture of a press conference, where communication between all participants of the educational process occur. The formation of speech skills is also needed to be improved on practical lessons, when discussing the theoretical material, performing various exercises and discussing the abstracts.

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IMPROVING PERSONNEL MANAGEMENT ON THE RATING EVALUATION BASE

Abstract*. The analysis of personnel management methods, including rating management, is provided. Analysis of current trends HR educational institutions in movement education reforms in Ukraine is done. The expediency of using methods of rating management and human capital theory to improve personnel management is analyzed. The algorithm of introduction of personnel assessment at the enterprise is outlined, providing a gradual and deliberate use of a variety of approaches, forms, methods, elements taking into specifics of company. The state and principles of rankings of higher educational establishments in the world, peculiarities and types of higher education institutions in Ukraine are considered, problems with the formation of a system of indicators of rating estimation have been identified. It is revealed that in Ukraine developed and used a number of methods for evaluating schools, the first step to build a unified methodology and analysis methodologies. However, developers of methods of evaluation of educational institutions, which are complex systems, scientists are calling the general public and users to participate in critical analysis of the proposed method.*

Introduction.

In economically uncertain times ever need active efforts for the development of managerial innovation aimed at improving indigenous economic management of the country. This is due to the transformations taking place in the country that require specialist new type of excellent training capable of and skill, creativity and without "care" head to solve various tasks put forward at times, including to improve not only the economic benefit of the enterprise, but both general, professional, including the cultural self-development of the personnel.

In the business along with traditional HR is the formation and development of new, innovative areas such as remote personnel management, personal- management (Hr-management), event – management and so on. For the education of qualified personnel whose knowledge and skills meet the requirements of time, a modern system of secondary and higher education is needed. These are one of the most important growth factors as human capital, generator of new ideas, the key to the dynamic development of economy and society in general. To education really effectively perform these important tasks necessary update given current global trends of development of education in the broad social and economic context.

1. Analysis of recent research and publications.

The problem of personnel management has always been the subject of research domestic and foreign scientists belonging to various scientific schools. The following scientific problems are studied by F. Taylor, A. Maslow, D. McGregory, V. Ouchi, V. I. Kramarenko, G. V. Shchokin and others. The general problems of strategic management personnel in the organization, the growing importance of the experience of foreign enterprises in developing approaches to the priority of values are considered by such prominent researchers as I. Ansoff, K. Bowmen, O.S.Vihansky, O.I.Naumov, V.S.Ponomarenko and others. Some aspects of modern personnel management and education and training of young cadres reflected in the works S. Byelyaeva, M. Vinogradsky, M. Zhuravlova, J. Ivantsevycha, A. Kybanova, V. Kolpakov, A. Lobanova, S. Myhaylova, M. Murashko, G. Shchokina, O. Schura etc.

In addressing management issues including strategic training are in the works of E. V. Balatskiy [4], M. B. Dyuzhevoy [2], N. I. Ekimov [4]. Authors in their works indicate that workforce planning should take the form of target complex programs according to strategy development management company with mandatory taking into account the fundamental areas of modern personnel policies and demographic trends of scientific and technological progress, personnel evaluation and the results of its work, improvement of personnel work. Problems rating management, including the construction of rating models dedicated to the works of famous domestic and foreign scientists, including V. Vitlinskiy [1], R. Lepa and Y. Lysenko [2], Y. Timokhina [3]. In the works of the aforementioned scholars it is addressed the construction of ratings for the economies of various purpose, the definition phases of the rating business management and methods of application built ratings in decision-making, with each author considers a separate type of rating model that meets the objective of his research. The whole variety of ratings and how to apply them in the management of educational institutions remained out of the question.

However, due to the complexity and multidisciplinary of this issue, in today's conditions there are issues that are not developed enough.

The aim of this study is to study the feasibility of using methods of rating management and the theory of human capital; to improve personnel management and development personnel evaluation algorithm implementation in the enterprise.

2. Presentation of the main research material.

It is need to improve the efficiency of labor, stabilize and improve the socio-psychological climate in the team while optimizing organizational structures and reducing the number of employees, today is relevant for many modern enterprises. Input ratings as assessment one helper on the other, allows a realistic assessment of many areas of process control systems, including objectively evaluate and optimize on the basis of existing enterprise business processes, which in turn will promote reasonable and effective restructuring of the organization in.

As a whole In the life of each enterprise there comes a period when knowledge of what its staff represents is becoming a key moment for the development of the organization itself, or for its preservation, survival under conditions such as the current economic crisis. It is then that there is a stage for applying to the rating (rating) of the personnel, that would not make emotional, subjective actions connected with reduction, dismissal or transfer of personnel of the enterprise. The conducted studies have shown [2] that exemption and reduction in enterprises are not based on economic efficiency of the individual worker, not according to the evaluation of its work and personal contribution to the development of business, and the subjective criteria, including: pre-retirement age employees (including retired people), recent employment in the company (in some cases, from 1 year to 3 years), marketing staff, personnel management services, in some cases the whole service, units, including psychologists and many other professionals under enterprises.

Strategy of reforming public management and civil service for 2016 – 2020 years says: "Analysis of trends in public administration reform in Ukraine over the past 10 years shows that it is moving to a model of new public management. However, despite the fact that since the proclamation of Ukraine's independence, the organizational structure of the management apparatus has undergone around 350 transformations, today public administration is still not in line with the country's strategic course towards European standards of democratic governance, since it remains ineffective, inclined to corruption, internally controversial due to a built-in conflict of interests, overly centralized, closed from society, unwieldy and detached from the needs of the citizen". [1] Such a statement can be fully attributed to the management of education.

One of the priorities of the reform of the education system is the transition from traditional methods of human resources development to education – personnel management to a modern, proven practice in developed countries and the best domestic human resource management organizations – fundamentally different technologies for personnel management. In the system of education of Ukraine, the current practice of personnel management is reduced to the fact that the personnel services of the education management bodies are mainly engaged in the registration of documents, organizational support for the competitive selection of candidates for the position and the conduct of certification of employees. Instead, the introduction of human resources management technologies involves an active involvement of the human resources service in the strategic development of the organization. It should be noted that this strategy is connected with management education in general, and in this context the personnel work is one of the most vulnerable and imperfect directions of education authorities in Ukraine.

Recommendations for its enhancement may be as follows:

1. The rating system has several rounds (from 3 to 10), each round must be worked out and logically completed, with the obligatory summing up of the tour, with the definition of the rank of the participants in each round and obligatory accountability.

2. Terms of rating: month, quarter, half year, year, etc.

3. The terms of the rating: the input staff rating (starting point of the reference, for further monitoring of the changes taking place with the employee), the main rating (basic indicators and criteria for the assessment of the position), raising the rating: the intensity of labor, employee's initiative, rationalization, Invention, etc. (This rating should not exceed the rating of the points), an additional rating: participation in the social life of the enterprise, participation in the formation of a favorable socio-psychological microclimate in the team, assistance in the consolidation of the labor collective, the continuity of work experience at this enterprise, etc. (Should not exceed the points of the main rating), the final rating.

4. The high rating on the rating should allow the employee to claim some kind of incentive provided by the provisions and legislation of Ukraine. It may be: announcement of a friend, awarding an honorary certificate of the enterprise, placing on the Board of Honor of the enterprise (district, city, region), entering into the Book of Honor of the enterprise, awarding the breastplate of the enterprise, increasing the duration of annual paid leave, bonus, incentive, professional appreciation. "Best in the profession of the enterprise", a performance for the best in the industry in the industry, awarding a valuable gift, etc.

The algorithm of forming a rating system in the management of personnel at the enterprise, which involves the phased and purposeful use of various approaches, forms, methods, elements, taking into account the specifics of the enterprise, may have the form, which is presented in Fig. 1 The algorithm of implementation of the rating system of personnel management is designed for application by its enterprises in relation to the entrepreneurial sphere of the economy. The algorithm of sequential actions can be presented in four stages.

Preliminary stage. The main objective of this stage is monitoring compliance with planned activities for compliance strategy, mission, objectives and functions of the enterprise rating system, which must not contradict the basic functions of personnel management in the enterprise. The step-by-step implementation of the previous phase is aimed at preparing the company for planned research and implementation.

Production-technological stage. At this stage, a working group of initiative staff is being formed, with which the entrepreneur delegates issues related to personnel management.

Training of the working group is connected with the rating system of personnel management, the roles of the given group are determined. The research, analysis of existing business processes in the enterprise (in the division) is conducted, taking into account its specificity, followed by a comparison of the results with the requirements offered to the position / workplace. It also may continue correction of these requirements according to the results of the conducted research. After that, standards, working standards and indicators for the position, the workplace of the place are set. Rating methods, scales, rating procedures and technologies are determined.

Support stage. At this stage, all activities carried out are accompanied and recorded by specialists throughout the study period. The support will allow to timely detect and prevent possible deviations in the process of the conducted research and in the process of implementation.

Final stage. It is developed and agreed upon provisions on the rating system of the personnel of the enterprise. The methodical recommendations for the application of the rating system of the personnel are developed and agreed, including rating cards for the assessment of processes: personnel training, personnel reserve formation, wage formation, staff incentives, staff assessment, staff attestation, employee development and career planning, recruitment and adaptation of new employees.

The basis for the rating system of evaluation should be the following rules of quality management. Personnel management should be based on the principles of transparency and social responsibility. The organization should create conditions that enable employees to translate the strategy and goals of the organization for individual purposes, as well as assess the degree of achievement. Employees should be able to identify the difficulties that arise in their activities and take responsibility for solving problems. The efforts of employees should be aimed at actively seeking opportunities to expand their own experience.

The organization must ensure that everyone understands the importance of his contribution and his role. The competence of the personnel is controlled by the organization through the determination of the professional competencies required by the organization in the short and long term in accordance with its mission, vision, strategy and objectives. The organization should find out the current level of competence of employees, inconsistency between it and the necessary level (taking into account the projection for the future), as well as take measures aimed at eliminating the inconsistency. Involvement and motivation of staff in the organization should be aimed at understanding employees of their importance in a professional manner.

In the world and European educational space rating systems have become widespread and applied in various spheres of economic, social and political activity. Rating evaluation of educational institutions all forms of ownership is an integral part of monitoring national education. This component satisfies the demand for such services and works on the reputation of the institution, competition stimulates, promotes active participation of target groups in shaping the modern requirements of training. For schools and high schools, high schools and colleges, institutes and universities are born not only new ideas, principles and spiritual growth of the state, but also preparing a new generation of competent professionals who can implement them practically in conditions of socially oriented economy.

The education system is constantly under the influence of dynamic changes in the political and legal, socio-economic, international, scientific and technological, environmental, socio-cultural, and so on. The quality of education in this situation depends on adequate anticipatory reaction of higher educational institutions to these changes.

Thus defined list of reasons that contribute to continuous monitoring of education and the use of ratings institutions, namely international competition exacerbated schools and universities; students and teachers know and compare the quality of education outside their home country; gradually formed the only international point of view on what should you boo high school.

Today, one of the global goals of many countries is developing human capital. At the heart of this particular type of capital there are competitive and flexible amplifying topic of education, which includes higher education institutions, including universities world class. And even these universities fight to the death for each new, higher position in the global rankings of universities.

The rating of higher educational institutions (HEIs) attracts a great public interest: annually it becomes a subject of increased attention of mass media, it is carefully studied by students, heads of institutions, politicians and employers. Regardless of their attitude to them, ratings play a prominent role in shaping the mindset of people about a particular institution. It is no accident that the European Commission is currently financing the development of a new multi-dimensional international ranking of higher education institutions, as well as a number of other projects on rating and related subjects.

Regarding the system of secondary education competition is no less acute, although it does not become so widely publicized.

In Ukraine, a number of methodologies for evaluating educational institutions have been developed and used, and the first steps have been taken to build a common methodology and methodology for rating analysis. However, developers of methods of evaluation of educational institutions, which are complex systems, scientists are calling the general public and users to participate in critical analysis of the proposed method.

The globalization of the economy has led to the globalization of competition. This process is not passed over such specific structures as schools. In many countries, takes a lot of work associated with the preparation of national and global rankings of educational institutions, designed to inform the public, at least to the best schools and universities in the country and the world. The relatively short history of rating schools shows that they become one of the most important tools of competition policy and education.

The first experience of drawing up the international rankings of educational institutions such as universities were acquired in 1997, when the magazine was AsiaWeek classification of the largest universities in the Asia-Pacific region. Although in 2001 this rating ceased to exist, during the course of its holding was acquired an important experience. The beginning of the systematic work on the construction of the system of global (universal) university ratings has been linked since 2003. At present, there are already about ten authoritative global ratings of universities, the role of which is increasing.

For many countries, getting into the top-level list of global ratings has become almost a national goal, the achievement of which largely depends on the international prestige of the state.

A large number of global university rankings acquire the properties of a real avalanche, which every year exacerbates its influence on various aspects of society's life. The most striking example of this effect is the Dutch Immigration Law, according to which the priority for entry into the country is granted to people with high professional qualifications, which is confirmed by the university diploma from the list of Top-150 global ratings . To do this, Holland has its own global ranking of Leiden Ranking (LR) universities, which is the University of Leiden (Center for Science and Technology Studies, Leiden University). Such work for European higher education has been carried out since 2000, and for the global sample since 2003.

Currently, there are many different global ratings of schools. In [2] analyzed the contents of the most famous of them, their properties and summarizes the classification, consisting of the following four groups.

The first group consists of ***traditional*** ratings, which are based on the evaluation of a large number of objective indicators of schools (colleges) and universities (activity index of scientific publications and citation indices resource support, career success of graduates, etc.). These include China Academic Ranking of World Universities (ARWU), Taiwan's Performance Ranking of Scientific Papers for World Universities (PRSP), French Professional Ranking of World Universities (PRWU) and Dutch Leiden Ranking (LR) rankings.

The second group consists of ***reputation*** or personalized ratings, based on the processing of expert opinions obtained through special surveys. As such, only the UK's World Reputation Rankings (WRR) is still in place.

The third group consists of ***virtual*** or online ratings are based on performance popular sites of educational institutions in the Internet environment (frequency of visits, links etc.). This group includes: Spanish Webometrics (Web), Armenian “ArcalLearn” and anonymous rating World Universities Web Ranking (4ICU).

The fourth group consists of ***mixed,*** or ***hybrid,*** ratings, which are used in the preparation of "mixture" three previous methodologies. At the present time – is usually a synthesis of traditional and reputation ratings. Among them are English Times Higher Education (THE), English Quacquarelli Symonds (QS), American Newsweek's The Top 100 Global Universities (NTGU), US News & World Report's World's Best Universities Ranking (WBU) and Russian Global Universities Ranking (GUR). Average global rankings and their types are summarized in Table 1.

With such a number of global (global) ratings, the question is: which one is the best, which one should be guided by, which rating is most trustworthy? With an attempt to answer these questions at this time is carried out the research, such as on their correlation,

etc. Interesting in this aspect are the results of public opinion research. One such survey was conducted by Thomson Reuters jointly with Ipsos Insight Corporation, a leading research firm engaged in the development and implementation of online surveys. The study covered 350 respondents (students and employees of educational institutions) from more than 30 countries. In particular, it identified three popular rating systems (Fig. 1).

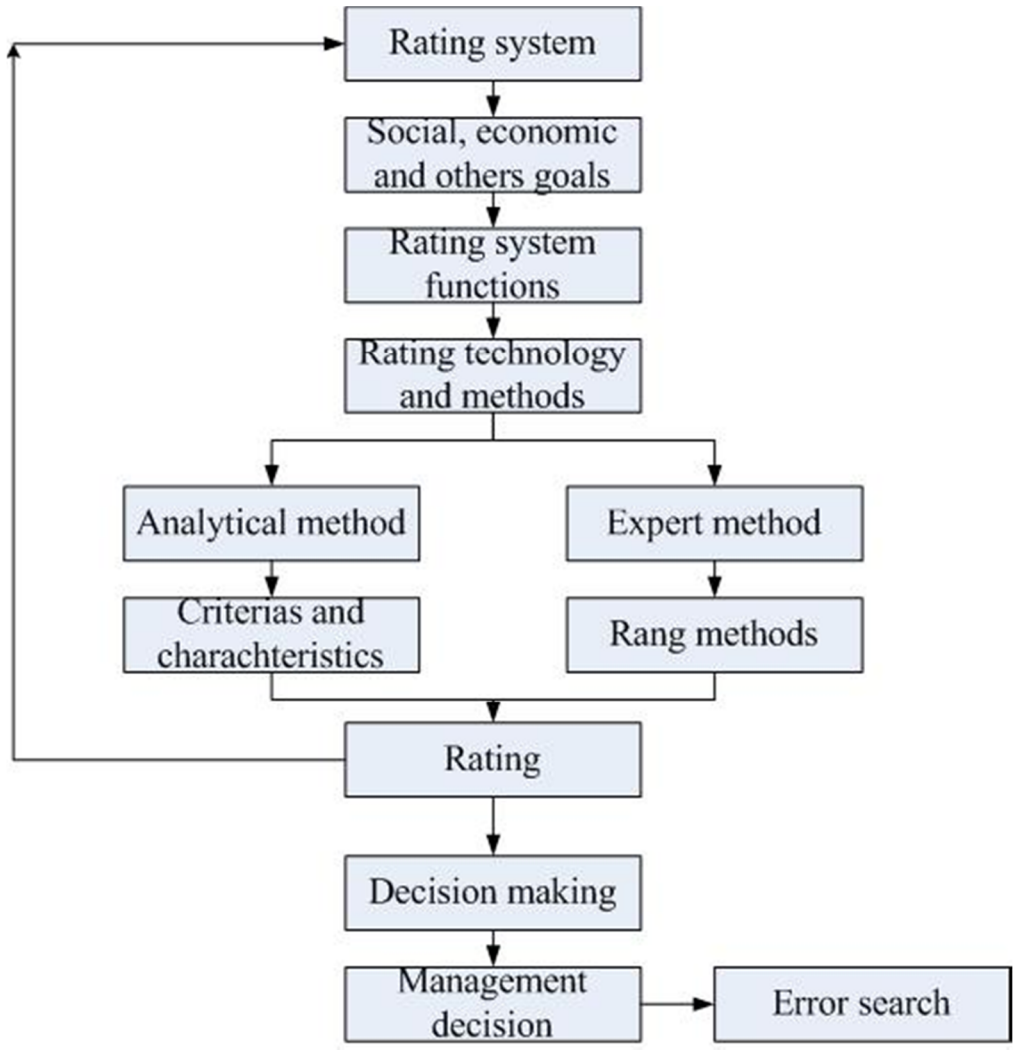

Fig. 1. Algorithm for implementing the rating system

The results allow to draw the following conclusions.

First, the most popular and recognizable global ranking is a British educational institutions THE; In the second place with a large gap is the Chinese ARWU, closes the same questionnaire American WBU.

Secondly, the revealed pattern applies to the representatives of Asia, which give a clear superiority to the European rating compared with the Asian ones. Moreover, Asian people are even more aware of THE than the representatives of all other regions.

Thirdly, the American WBU rating, being formally global, is still more local and regional than the WBU; Representatives of other parts of the world are very few familiar with them.

Thus, one can state that among the global ratings on the world stage, the struggle for recognition of the broad masses unfolded, which is fixed in the results of authoritative surveys. The presence of many different national and global ratings has led to attempts to standardize them and assess the degree of coherence. For example, in 2004, the Institute for Higher Education in Washington and the International Expert Ranking Group (IREG) were created in Bucharest by the UNESCO (UNESCO-CEPES) European Higher Education Center. And from 18 to 20 May 2006 in Berlin held a second meeting (IREG) to develop guidelines and standards for ranking schools – Berlin principles ranking institutions.

The result of this initiative was the development of the basis for the creation and dissemination of national, regional and world rankings. These bases are reflected in the following areas: a) the definition of goals and objectives of ranking, b) the development of indicators and their weights, c) the collection and processing of data, d) the presentation of ranking results. Taking into account the heterogeneity of the techniques used, the adopted principles of ranking have created conditions for the emergence of continuous improvement system and improvement of the techniques used in conducting such ratings, which contributed to improving the ranking and assessment of the quality of education.

The Berlin principles that must be followed in determining the goals and objectives of ranking are as follows:

1. Be one of the diverse approaches to assess the cost of education, processes and results.

2. Clearly understand the tasks and target audience.

3. Recognize the diversity of educational institutions and take into account differences objectives and goals of their activities.

4 Ensure clarity of the spectrum of sources of information resources used in rankings, and indicators generated by each such resource.

5. Consider linguistic, cultural, economic and historical context of education, for which the ranking is conducted.

Thus, global education rankings are tightly woven into the national policies of many countries, becoming a prominent factor in the education market. The basis of this (in the opinion of many experts, hypertrophied) the role of ratings is the “rule” of relations establishment with the outside world, formulated Waldemar Sivinskiy (Poland): “your work do not go the way you think and the way they perceive the public”.

Ukraine has also taken some positive steps to implement at national level rating system of evaluation of educational institutions [4], but it applies only to higher education. In 2003, on the initiative and support of the Scientific Research Institute of Applied Information Technologies of the Cybernetic Center of the National Academy of Sciences of

Ukraine, the Center for International Projects "Eurovision" was created. The mission of the Center is to implement the principles of international expertise and rating assessment of higher education institutions in Ukraine, monitoring the quality of knowledge, developing and implementing international educational projects, programs, various measures aimed at improving the information infrastructure in Ukraine, developing and expanding the implementation of the newest Information technology (IT).

At present, work is being done on the development and improvement of various ranking methods of higher education institutions. Each rating has specific goals and has relevant target groups of users. The Ministry of Education and Science, Youth and Sports of Ukraine declares that all ratings have the right to exist. Priority and recognized rating will be recognized based on the principles of availability, openness, transparency, transparency and responsibility of the developer for the quality of the rating system itself. This indicates that work on the ranking methodology of the university is not stopped [4].

The most commonly used national rankings such as UNESCO's "Top 200 Ukraine" and "Compass", an international rating of “Webometrics”. It is the consolidated ratings of universities Ukraine 2016, which includes the results of the integration of the first three rankings and the National System of rating assessment of higher educational establishments. Each rating has its own peculiarities and limitations. Consider briefly the main features of the national university rankings.

TOP-200 Ukraine covers the 200 best universities in Ukraine of the 3rd and 4th accreditation levels. In questionnaires they indicate their scientific and pedagogical potential, international activity and the quality of students' training. In addition, information from the Ministry of Education of Ukraine and the information system “Osvita” is used.

The total score earned by the university in the UNESCO Top-200 Ukraine Ranking Rating is calculated using the general rating index. The basis of this ranking is taken a method of determining the best universities in the world “Shanghai Jiao Tong University TOP-500”. Such a technique is as close as possible to the Ukrainian system of higher education.

Compass. Total in 2016 in the ranking were evaluated 234 universities in Ukraine for five professions that are most in demand in the real economy. The following criteria were taken into account when calculating the rating: satisfaction of graduates of higher educational institutions with the received education and the possibility to apply it in labor activity; Employers perceive the quality of education in Ukrainian universities; Determination by employers of Ukrainian universities that give graduates better preparation for work in their company; Perception by experts of the quality of education in Ukrainian universities; The definition of companies by experts from Ukrainian universities that provide better training for their company and, finally, cooperation between higher education institutions and employers. From this perspective, this rating is important for the representatives of the labor market and educational authorities.

Table 1.

Distribution of global university rankings by type

The type of global university rankings			
Traditional	Reputation	Virtual	Hybrid
ARWU		The web	THE, QS
PRSP, LR	WRR	4ICU	NTGR, WBU
PRWU		ArcAller	GUR

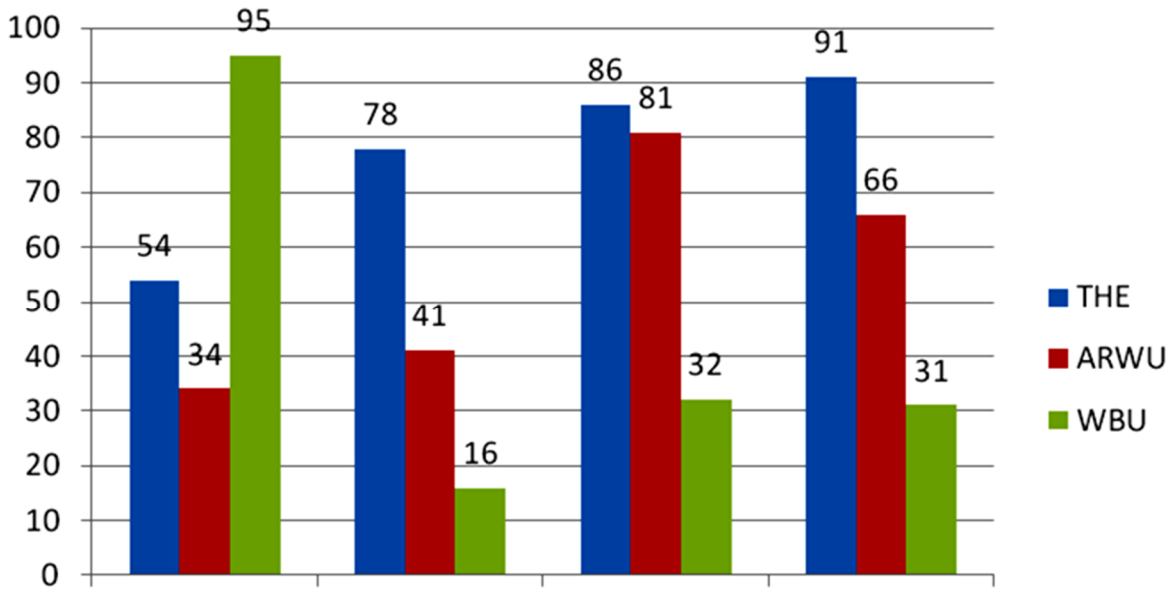

Fig. 2. The level of educational rating awareness with respondents from North America4 Europe, Australia, Asia in 2016,%

The rating of Compass Universities was prepared within the framework of the program "Modern Education" (an integral part of corporate social responsibility of System Capital Management). Consolidated ranking universities in Ukraine in 2016 [13] swept estimate 275 universities III-IV accreditation levels and has 4 sub rating Top 10 “Best traditional universities of Ukraine”, “best private universities in Ukraine”, “Best Kiev universities” and “Top Ukraine Region Universities”. This rating is based on the calculation of a simple total of rating places of higher schools, as determined by the rating version: UNESCO Top 200 Ukraine, Compass and Webometrics, each of which uses different criteria for assessing higher education institutions. The expediency of compiling such a rating is explained by the attempt of a comprehensive view on the results of the higher education industry even without additional costs.

Conclusions.

Thus, we can conclude that in Ukraine there is a need for a critical look at the system of school rating evaluation. It is because there is absolutely accurate methods for determining rankings. Therefore the main task developer ratings remain their further improvement. Thus, this study has revealed that rating can be applied in various fields and sectors of activity. Widely if is used rating in the formation, marketing, advertising, economics, from the recent time – in management. Application of the rating is becoming relevant today, because, based on its main function, every head of the optimization of the workplace must have an objective assessment of the potential and personal contribution of employees to business development.

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THE HUMANISTIC-COMPETENCE PARADIGM OF THE PROFESSIONAL DEVELOPMENT OF INDIVIDUAL IN THE MEDICAL LYCEUM

Abstract. *According to the analysis of psychological pedagogical literature, biographical material about life and work of famous doctors from the past and present times and own researches provided the following moments of humanistic-competence paradigm in educational process of lyceum: forming the humanistic direction of personality at lyceum pupil and general qualities for personality of doctor (world outlook and common to mankind values, professional interests, inclinations, ideals, power of observation, cogency, organizational capabilities); developing the emotional motivation and volitional components of personality (love to people, direction to the good, ability of empathy, adequate self-assessment, aspiration for socially significant purposes, initiative, exigency to oneself and other, abilities to overcome with difficulties); mastering the knowledge about work of doctor, its professional activity, its specificity, role and status of doctor in society, requirements to its personality, formation of skills to find out the adequate forms for communication with people, organizing, constructive, communicative skills and abilities, capabilities of cooperation, co-creativity in activity, skills self-critically to assess its activity, purposefully to perform self-education and self-upbringing, language skills, culture, emotionality, significance of speech.*

Introduction.

Under conditions of cardinal changes that take place in the social life of Ukraine, there is the acute problem on formation of socially mature, industrious, creative personality of citizen, being capable to show its creative potential in practical activity, to sustain the competition, to defend and to protect own opinion, interests under conditions of market relations. The solution of this problem is reflected in construction of system of education. The social economical development of Ukraine, the spiritual revival of Ukrainian nation are distinguished by many factors, among which the leading place is for professional potential of personality, in which formation the pre-occupational training of pupils' youth at establishments of new type – lyceums acquires more and more importance. The activity of abovementioned secondary schools shall closely be related to the work of higher schools of the corresponding profile, and their activity is significantly stipulated by specificity of future occupation. G.O. Ball and P.S. Perepylytsia emphasize the actuality of their activity and mention that the modern training at different links of professional education is first of all based on general education school, and, unfortunately, the traditional learning and upbringing system that prevails in the latter does not assist to formation of psychological readiness for receipt of professional education and for further independent work, all the more – under market conditions [1].

The educational establishments of the new type are designed to revive and to reinforce the intellectual potential of Ukraine. "Each pupil shall find "own" organizational pedagogical structure for acquisition of education, in which he/she would feel mostly comfortable, namely in it" [2].

1. Lyceum space - opportunities for professional development of a person

The management of pedagogical staff under conditions for implementation of humanistic paradigm for education requires the significant attention. M. Mykhaylov emphasizes that the orientation of the staff to provide with personal development of each pupil may be reflected in planning to use the new forms and means of educational process – conference, thematic discussions, Olympiads, research work, round tables, thematic parties (for example, "Cossack funs", "Ukrainian kickback", "Auction of ecological ideas", "Intellectual potential of lyceum", "Health generation of lyceum", etc.) [3].

The establishment of favorable conditions for development of creative capabilities at pupils is significantly defined by the content of learning material, application of active forms and learning methods in educational process, which assist to development of divergent thinking, problem vision, fantasy and imagination. Unlike traditional forms and methods of study, which efficiently assist to the development of sinistrocerebral logical thinking operations, the active forms and methods, as R.M. Granovska mentions, are directed to psychological liberation of dextrocerebral processes on unconscious information handling, development of intuition, stimulation of insight, aspiration [4].

Let's mention that the motivation of learning cognitive activity plays the significant role for personal development of pupils in the process of their pre-occupational training at lyceum. In opinion of I.A. Ziaziun, the important and complex task is to transfer the content of education into inner world of personality. For that, it is necessary to organize the psychologically grounded activity of two subjects *"teacher-pupil"*, being equal in relations, striving to actualize the formation of inner personal motivation at pupils in satisfaction of their essential needs [5].

Characterizing the "educational process at educational establishments of the new type, it is impossible to overlook their conceptual basics", - P.I. Drobiazko [6] thinks. Authors V.F. Palamarchuk and B. Chyzhevskyy mention that the modern world is the ecological, economical technological, historical social multicultural system of interrelations, influences, contradictions, and, thus, the perception of the world as a single system of diverse forms for existence of cultures, languages, ideas, opinions, realization of this diversity and unity stipulate upbringing such human qualities at youth as tolerance, respect for other cultures, religions, beliefs [7].

As V.P. Kysilyova thinks, the word *"lyceum"* itself means that as if some special magic force is hidden in it. The breath of antiquity comes from it, the brilliant season of childhood from "golden age" of world culture, morning of education, when a teacher had nothing but his/her own thought, talent and spiritual achievements, created by humankind.

And he/she paid no attention to any norms and rules, except the thirst of knowledge! The word “lyceum” or “lýkeion” came from Ancient Greece. Lýkeion was the sanctuary in Athens, dedicated to the god of the sun and poetry Apollo. The same name was granted to old Greek philosophical school, which was founded by Aristotle in 334-335 A.C. (there is no common opinion on exact date for foundation of that school among researchers), and existed for about eight hundreds in the suburb of Athens near the Temple of Apollo Lycia [8]. The analysis of information that came to us testifies to the fact that lýkeion was an original folk university, where the concrete researches of natural scientific characters was held in addition to lectures and discussions. The classes were performed in the morning, and at noon the lýkeion was opened for a wide circle of visitors. Aristotle established the lýkeion as an original school, which purpose was the spiritual improvement of human, study of nature, space, philosophical understanding the creation of the world and human society.

V.P. Kysilyova in her researches on history of lyceum education emphasizes that “lyceums existed not so long in terms of historical time. In Ukraine they started reviving since 1989/90 academic year. The process for their establishment was in a certain manner stimulated by Law of Ukraine “About education”. And 73 lyceums were working already in 1991/92 academic year, 105 – in 1992/93, 124 – in 1993/94, 106 – in 1994/95. Now the process for their spontaneous quantitative grows to a certain degree slowed down and the period for qualitative transformations started” [9].

In our opinion, the latter tendency has the positive meaning as the formal establishment of lyceums without qualitative reconstruction of educational process enforces to discrediting the idea about creation of such schools itself. At the same time P.I. Drobiazko writes that 400 educational establishments of new type are now working in Ukraine [10]. Although at initial stage of revival the lyceums in Ukraine were considered as schools of alternative education, we fully agree with the opinion of those scientists and practical men (V.A. Kapranova, A.M. Matiushkin, V.O. Moliako, V.F. Palamarchuk et al), who think that schools of new type, in particular, lyceum, shall not be an alternative to secondary general education school. According to this position “the elite character of lyceums and gymnasiums does not mean the special social status but the development of new pedagogical technologies, authors’ programs, models of educational practice”. It is necessary to emphasize that new types of schools now work in close interrelation with scientists.

We think that the note by P.I. Drobiazko that “opening gymnasiums, lyceums and colleges justifies itself and is perspective in those regions, where the material, staff and academic methodic conditions for successful work with pupils’ youth are established”. The new types of schools in their beginning are not limited by own searches for new forms of work, its content, specialized directions of pupils’ learning and involve scientists, teachers of higher schools and even invite teachers from Diaspora as specialists in foreign languages. The specialists of higher school are not only the teachers and advisors but the direct helpers in arrangement of educational work at schools of new type” [11].

Having studied the work of secondary general education schools, V. Kysilyova [12] distinguishes the following characteristic peculiarities, being common for all lyceums:

– Conformity in projects on system of lyceum education to the call of the times.

– Orientation to progressive pedagogical ideas and theories by leading European scientific educational centers.

– Upbringing the youth concerning the national, public, economical social principles.

– Free talented personalities of teacher and pupil are in the center of activity.

– Great need in creative activity.

– Intermediate link between gymnasiums and higher schools.

– Forming the pedagogical thinking of teachers at lyceums taking into consideration the achievement of pedagogical and other sciences (mathematics, physics, philosophy, etc.)

The pre-occupational training of pupils' youth is most purposefully conducted at lyceums, gymnasiums and work training centers, as G.O. Ball and P.S. Perepylytsia fairly mention, it is often brought almost to professional one. The same work is also performed at lyceum, gymnasium and specialized forms of general education schools. Different forms of club work at schools and out-of-school establishments, elective courses, clubs of occupational direction, scientific, artistic and technical creativity, folk crafts, etc. significantly assist to pre-occupational training. Thus, the specialized pre-occupational training of schoolchildren may have various organizational forms and content [13].

It is worthy to mention the statement by V.G. Kremen that many higher schools fruitfully cooperate with future university entrants starting from school, lyceum and gymnasium. It enables creating the integrated curricula and programs, involving professors into teaching process at low levels of education, strengthening the material base of educational process that will significantly improve the quality in training of specialists [14].

The analysis on practical activity of lyceums allowed distinguishing *the advantages* for these educational establishments: curricula and programs; teachers and tutors of high qualification; involvement of teachers from higher school into educational process; direct relation with higher school at organization of learning and upbringing; boarding school system, which anticipates twenty-four-hour staying of pupils at school that assists to establishment of creative environment and extension of its educative opportunities [15].

Besides, the researchers of abovementioned problem think that the necessity in establishment of such lyceums is stipulated by humane purposes [16]:

– Withdrawal from school monotony;
– Humanization of education;
– Improvement of education quality and its fundamentalization;
– Development of capabilities and gifts of pupils' youth;
– Improvement in level of culture in youth environment.

The content and organization of scientific methodic work at schools of new type was considered by O. Sydorenko, who, analyzing the organization of internal school scientific methodic work, defined the main directions in organization of work on improvement of occupational mastery at pedagogical staff, determined the peculiarities for formation of content, structure, forms of scientific methodic work in comparison with general education schools, disclosed the main principles for internal school scientific methodic work and described the experience of its organization at schools of new type in Kharkiv region [17]. The abovementioned researcher mentions that Yu. Babanskyy, N. Vaschenko, I. Zhernosek, S. Krysiuk and other scientists consider the scientific methodic work as a part in system for improvement of teachers' qualification that is carried out during intercourse period. S. Batyshev, Yu. Gilbukh, M. Drobnokhod are inclined to consider it to be an element in organizational structure for management of educational process. T. Besedina, V. Bondar, M. Krasovytskyy, B. Bezpalko considers it as a form for organization of study and implementation of achievements in pedagogical science, advanced experience and mastery of new pedagogical technologies.

The statement that the first place among the most important directions, where the formation of content for scientific methodic work at establishments of new type is carried out, is for provision with methodic culture of teachers – learning the most important state regulatory documents that define the methodology of modern education, is essential [18].

In opinion of N.F. Grigoryev, A.V. Arsentieva, the study at lyceums in group of 10-20 persons is reasonable. They mention that the content of academic courses may to a certain degree repeat the school program but the learning material shall be united into content-rich units that enable significantly accelerating the review and integrating the pupils' knowledge. Of course, the practical training of pupils – solution of tasks, problem situations, analysis of facts and phenomena, etc. requires the special attention. Besides, the mastery of skills on independent work with learning material, formation of their readiness for self-education, development of creative capabilities acquires the important meaning for pupils [19].

The involvement of pupils into creative learning activity gets the special importance at lyceum. In opinion of western researchers, for efficient organization of creative learning activity of pupils it is necessary to fulfill two conditions: to perform the psychological pedagogical diagnostics for level of creative development at pupils and perfectly to define the content of the subject, being taught, and the purpose for activity of teacher at lesson [20]. However, we agree with the opinion that these conditions should be added with the following one: the efficiency in organization of creative learning activity at pupils depends on the skill of teacher to take into consideration the laws for progress and stages of creative process.

As S.D. Maksymenko mentions, while assessing the academic load it is necessary to distinguish the complexity as an objective characteristics of task and difficulty as a subjective characteristics. The academic loads of pupil in fact depend first of all on its complexity.

While developing the rates for academic load it should not be ignored that, firstly, what kind of activity a pupil carries out, and, secondly, what personal sense some or other learning tasks has, and, so, what interest it causes. In this connection it is reasonable to remind: still I.P. Pavlov showed that when the information does not cause to interest, the center of its active rejection is formed in the brain cortex. And to enforce pupils to work without interest means to form not creators but thoughtless executors [21].

As it concerns the issue on organization of pre-occupational training of pupils at lyceum, we are based on conceptual provision by B.O. Fedoryshyn, who states that in methodological terms he stands up for position to limit the age contingent of pupils that are engaged into work on professional information, early adulthood and youth age. Herein his position is opposed to predominant position for dislocation of "striking" core for professional orientation to the most primary school age of child that shall provide with "occupational self-determination at junior schoolchildren" (M.M. Zakharov, 1988). This researcher thinks that the predominant concepts for early professional orientation are based on absolutization of its professional information component with its intensive saturation with professional agitation that is directed not to the favor of interests for overall development of child's personality in early school age but against it [22].

According to positions by B.O. Fedoryshyn, the professional orientation in any of its structural components acts as the system of special purposeful human activity namely in that age when, on the one hand, the issue about change in status of personality is actualized (schoolboy – student, schoolboy - self-employed person), and, on the other hand, - when the psychological prerequisites for conscious and competent solution for problem of occupational self-determination are formed. B.O. Fedoryshyn thinks that one of the most efficient forms for professional orientation work with pupils' youth is the system of lessons (classes) in professional information for pupils at 9^{th}, 10^{th} and 11^{th} forms of general education school. The personality of pupil is in the center of lesson in professional information. He acts as an active and interested subject of lesson that works to meet its actualized cognitive needs and needs in self-fulfillment. The reflection of these human needs in developed content and forms for professional information work, implementation of systemacity principle in construction of this work provide the professional information system with the character of active operating system, directed to "professional orientation maturation" of personality, development of its capability analytically to design the psychological structure of any professional activity to psychological sphere of own personality.

As L.M. Zhuromska mentions, the psychological service of lyceums is designed to serve to establishment of conditions for development of pupils' personality, formation of stable interest to chosen occupation at them, conscious occupational self-determination. She mentions that the purpose for activity of lyceum's psychological service shall be subject to the tasks of lyceum in the whole.

This researcher suggests the following directions for activity of lyceum's psychological service that assist to development of pupils' personality: psychological pedagogical education for all participants in educational process; overall diagnostication; consulting teachers, pupils, parents; corrective developing work; advanced professional orientation of lyceum pupils [23]. As L.M. Zhuromska emphasizes after selection of lyceum pupils the vector of psychological diagnostics shall change its direction. It becomes more directed to pupils' cognition of their individual psychological peculiarities that is the basis for self-development and self-correction.

Thus, lyceum education shall be non- disparate. Otherwise, as V.G. Kremen states (he considers the personal developing learning to be the scientific priority of nowadays), the learning content due to logic of its scientific understanding shall be the stimulating means for general psychological development of schoolboy, first of all, his establishment as personality.

In opinion of V.V. Prysakar, the establishment of professional orientation subsystem, which includes the pre-occupational learning, where the needs, interests, purposes of pupils are studied, their motivation sphere is formed, sets the establishment of professional suitability of future specialist, in particular, teacher as its final purpose. Such conditions are established at organization of pedagogical forms at educational institutions of the new type: gymnasiums, colleges, lyceums. The pupils in such forms, where the division is carried out due to the level of development, capabilities and interests, learn the basics for occupation of teacher, acquire certain practical skills and abilities. In the process of concrete subject activity, participation in self-management they have the possibility to show their inclinations, needs, abilities, to persuade in conscious choice of future occupation [24].

2. Specificity in management of general education schools of the new type

P.I. Drobiazko thinks that the task to develop the new system of management was set to scientists and practical men with the appearance of alternative educational establishments. It is possible to implement it subject to overcoming with the state monopoly in organization and content of learning and upbringing of growing generation, creation of creative atmosphere for closest communication of staff members, provision with the corresponding work regime, learning design, creative and business relations of teachers with environment, establishment of the new mechanism for management [25].

As M. Mykhaylov emphasizes, the personal pragmatist approach as a condition for humanization of educational process at lyceum requires the humanistic reinterpretation of functions for management of process for training of pupils for study at higher school, search for methods and means for humanization of the whole life of lyceum pupils [26].

O. Sydorenko tells about solution of problems in learning and upbringing of pupils that is provided by thorough science-grounded selection of education content and its methodologically correct implementation into educational process. Teachers and pupils are constantly in the state of collective and individual creativity, intellectualization of

interrelations. Besides, the concepts for development of schools of the new type anticipates the personality-oriented approach to organization of activity at establishment, which takes into account the peculiarities and psychophysical qualities of all subjects in educational process [27].

D.I. Rumiantseva and V.P. Goncharova [28] researched the specificity in management of general education schools of the new type. In their opinion, it is:

- In organic combination of state authorities and organizations, which function on public bases, in management of school, in refusal from formalized management structures and command-and-control methods of management;
- In definition and regulation of mechanism to form the resources of educational establishment taking into consideration the state, municipal, own material funds and allotments by charitable organizations and contributions of private persons;
- In establishment of conditions for scientific organization of labor, mode of the largest assistance to all members of pedagogical staff taking into consideration the national, regional and other peculiarities of educational institution;
- In establishment of conditions for upbringing and learning of children;
- In development of professional competence at each teacher;
- In orientation of academic programs at establishments of new type to UNESCO academic programs, inclusion of new structure of educational establishments into national educational funds in order to extend the scientific pedagogical relations and material provision;
- In integration with scientific centers and higher schools to establish the joint base and for rational use of pedagogical staff, rendering the assistance to them in improvement of scientific teaching level, performance of joint methodic and scientific researches;
- In orientation of heads at educational establishments of new type to perform all management function in order to receive the positive final result, to perform the systematic purposeful approach in management;
- In provision with selective entry to educational establishment of the new type and contest selection of pedagogical staff for work at them.

The leading management functions under conditions of schools of the new type are prognostication and coordination of actions between separate links of management system inside lyceum or gymnasium and with higher schools, integration with cultural environment.

M. Mykhaylov suggested the concrete model for management of educational process at lyceum. It is implemented in two levels – *microlevel* (management by directorate of educational establishment) and *operationalized* (teacher in academic group directly carries out the management). M. Mykhaylov thinks that the primary functions for management of educational activity are planning, organization, motivation and control. The management as an activity consists namely of these associated processes (communication, taking decisions and control) [29].

Let's mention that the peculiarity for development of education during the 90-ies of XX century is the extension of rights for general educational school in solution of numerous issues of its activity. The definition of a school type, a certain variant of curriculum, system of educational, extracurricular activity, content of school component, methods of educational process – this is the incomplete list of issues that start belonging to the competence of schools.

V.M. Alfimov – author of over 70 scientific works, most of which are devoted to substantiation of pedagogical basics for organization of educational process at lyceums, in particular activity of lyceum at Donetsk state university, starts his activity in the 90-ies of XX century. He thinks the lyceum enables implementing the need in creative development of personality and formation of intellectual elite for society. In opinion of the abovementioned researcher, the close interaction with higher school, establishment of learning and upbringing complex (LUC), which core is the purposeful continuous complex program for development of pupils help to provide with implementation of those targets. Thus, for example, the lyceum at Donetsk state university is one of the leading components in LUC "lyceum-university". In 1991 194 pupils studied at lyceum due to nine specializations. The learning and upbringing work at lyceum was carried out pursuant to the concept about upbringing of creative personality. The work at lyceum is conducted as a controlled psychological physiological process on development of senior schoolboy, oriented to the model of lyceum graduate. The program for creative development and self-development of personality is composed for each senior pupil at pedagogical consultation to provide with upbringing. This program offers certain tasks to all participants in pedagogical process, which teachers implement during lessons and tutors supervisors – at extracurricular time – in different kinds of collective scientific, permissive activity, parents at family affairs, collective – at joint classes. A personality constantly addresses to self-upbringing and self-education. According to the system by V.M. Alfimov the development of personality at lyceum pupils is based of principles of pragmatist approach. The differentiation was made to improve the efficiency in work within the specializations. Thus, for example, the senior pupils in mathematical form study due to three different programs. The lesson has the form of individual group consulting [30].

We think that we can distinguish the following common features in organization of activity of abovementioned educational establishments:

– Implementing the semester pass/fail form of study with six days mode of educational work;

– Performing the lecture, laboratory, practical and seminar classes;

– Teaching the overwhelming majority of specialized subjects, elective classes and special courses by teachers of higher schools, which are the basic ones for this secondary school that performs the pre-occupational training;

– The professional direction of the whole educational process;

– The graduates from abovementioned secondary schools are enrolled to the higher school pursuant to interlocution or results from final exams for school certificate.

It should be mentioned that the establishment of spiritually rich personality of future specialist "is impossible without its perception of common to mankind moral ethic and esthetic values, mastery of spiritual culture of native ethnos, nation, people" [31]. G.I. Ivaniuk and O.A. Maslianytska think so and emphasize that "the knowledge of achievements by native people is the basis for spirituality of human". Hereby the significant attention should be paid inoculation of love to native language, development of pupils' speech. Studying the abovementioned problem, L.Ya. Romanova found out the pedagogical conditions to form the professional functional speech at lyceum pupils of economical specialization on integral basis, grounded the purposes, tasks and functions of lyceums at formation of professional functional speech, defined the non-traditional forms and methods for improvement of the abovementioned process [32].

The development of new methodological approaches to pre-occupational training at lyceums requires the new philosophy of education. As V.S. Lutay mentions, the philosophy of modern education cannot be founded only on one certain philosophical system, including in such one that tries to synthesize all main achievements of other systems in it [33].

It is worth mentioning the opinion by L.N. Cherniavska that the aspiration for self-determination, self-realization, self-fulfillment is one of the most important needs of human, the condition for its mental development. Hereby, the level in development of activity as a subject potential of personality is considered to be the important parameter for professional direction of pupils [34]. According to the analysis of psychological pedagogical literature (I. Vilsh, O.P. Savchenko, T.V. Supriata), biographical material about life and work of famous doctors from the past and present times and own researches we think that it is necessary to provide the following moments in educational process of lyceum::

- Forming the humanistic direction of personality at lyceum pupil and general qualities for personality of doctor (world outlook and common to mankind values, professional interests, inclinations, ideals, power of observation, cogency, organizational capabilities);
- Developing the emotional motivation and volitional components of personality (love to people, direction to the good, ability of empathy, adequate self-assessment, aspiration for socially significant purposes, initiative, exigency to oneself and other, abilities to overcome with difficulties);
- Mastering the knowledge about work of doctor, its professional activity, its specificity, role and status of doctor in society, requirements to its personality, formation of skills to find out the adequate forms for communication with people, organizing, constructive, communicative skills and abilities, capabilities of cooperation, co-creativity in activity, skills self-critically to assess its activity, purposefully to perform self-education and self-upbringing, language skills, culture, emotionality, significance of speech.

We should hope that the development and implementation of new ethic rules for professional activity of doctors into practice will become the breaking period in national medicine. "*Medice, non nocere*" (doctor, do no harm) is a well-known principle of medicine. A doctor can do harm when it keeps the absolute passivity. The modern medicine also emphasizes the other important principle – "do the good" i.e. the preference is given to the active position of doctor. In other words, instead of prohibition *"do no harm"* the positive imperative – *"do the good"* acts. In fact a doctor shall work for the benefit of patient. The object of doctor's work as a teacher is the people, the tool of labor and its result is also a human. It is necessary to follow to such ethic categories as duty, conscience, justice, love. It is necessary to understand people, to have knowledge in the sphere of psychology. A medical man shall develop a certain emotional position at itself, empathy – understanding, compassion to mental state of other human. To learn to be a doctor means to learn to be a human – this is the life motto of medical man is mastered by pupils at medical lyceum.

The Code of professional ethics for medical nurses of Ukraine emphasizes the importance in mastery of high moral qualities by medical nurse, such as humanity, consideration, mercy, attentiveness, honesty, responsibility. The Code distinguishes the main conditions of nurses' activity: professional mastery and professional competency, as well as emphasizes the necessity so that the abovementioned Code would become the standard for moral ethic behavior of medical nurses [35].

We fully agree with the opinion that the source for development of personal features and qualities of individual is the social experience, accumulated by previous generations of people in the process of their cognitive, labor, moral, esthetic, creative activity. The sources, which assist to establishment of self-organized personality, are contained both in the subjective and external sphere. The external social environment influences on development of capabilities for self-organization through need-motivation sphere of personality [36].

B.G. Chyzhevskyy and V.V. Sgadova distinguish the following unsolved problems, faced by the schools of the new type [37]:

- Creating the clear system of state education with determination of the place for schools of the new type in it;
- Creating the state system for training and re-training of pedagogical staff to work with gifted children;
- Determining the differentiated level of pupils' knowledge depending on the type and specialization of educational establishments;
- Producing the appropriate curricula and programs, study guides, textbooks, didactic material, including with short-run series to work with gifted children;
- Forming the system of continuous education which anticipates the search and support for gifted pupils' youth.

Conclusions.

In opinion of most national and foreign scientists, the main peculiarities for systematic approach to analysis and further synthesis of operation of management by educational establishments are the relativity of system, possibility to distinguish the qualities according to the purpose and tasks: practical direction of systematic approach; impartiality of research. The systematic approach enables designing the efficient rational objects; as well as educational establishments and systems of their management [38].

That's why, analyzing the activity of educational establishments, V. Sharkunova makes the conclusion that their management is legally separated into independent, specific direction – *pedagogical management, management in the sphere of education,* etc. the systematic approach to the analysis on activity of educational establishments proves that they confirm to the leading provisions in theory of systems and are the qualities of integral complex formations – dynamic social pedagogical systems.

The researcher thinks that the purposeful function of management at schools, gymnasiums, lyceums, etc. is the management of educational process, which can conditionally be divided into management of learning process and pedagogical control for upbringing of pupils. Learning, which is organically related to the spiritual development, upbringing the qualities for citizen of Ukraine, has the specific peculiarities. They are reflected in certain laws, principles, content, forms and methods for organization of joint activity of teachers and pupils, which is described in many works by national and foreign researchers. On this basis, V. Sharkunova thinks that it is reasonably conditionally to separate the learning from upbringing as an independent object in the management structure of educational establishment.

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THE PROBLEM OF PROFESSIONAL DEVELOPMENT OF FUTURE TEACHER IN THE CONTEXT OF THE EGALITARIAN PARADIGM

Abstract. *The article deals with the psychological mechanisms of forming egalitarian personality of future teacher, professional determination of students in modern controversial system of traditional / patriarchal and egalitarian / democratic coordinates. The humanization of the educational space of a modern Ukrainian school in the context of European integration requires a rethinking of a gender phenomenon in the systemic process of educational and professional preparation and development of the civic position of the young generation, which actualizes the problem of forming gender competences for future teachers as key life competencies, egalitarian outlook. This research investigates psychological effects of the gender stereotypes on the identity of young men and women in the Ukrainian society. The suggested psychological model of sex-role identification helps to generalize external (social-educational) factors and personal determinants of personalization of gender "I". The social and pedagogical factors and personal determinants of personalization of gender "I" on the principles of equality and parity of sexes are generalized. On the background of "general social transformation", young women are more likely to identify liberal settings, support for the equal distribution of family's roles, and try for equal opportunities for self-realization and building egalitarian relations than young men. These tendencies allow increasing subjective potential of personality, determining the psychological prospects for future life creativity of young women as a way to overcome usual stereotypes, which demonstrates the need of the development and implementation of gender specific ideological system of knowledge and practices, relevant to psychological principles of parity and self-realization of sexes. The authors model of gender and educational technologies as pedagogical support of sexual socialization of a personality during the period of her/his growing is developed and tested. The prospects of studying the problem of social modelling of gender in the students' environment, ways of forming the egalitarian personality of a future teacher are outlined.*

Introduction.

Humanization of the educational space of the modern Ukrainian school in the conditions of European integration requires a rethinking of a gender phenomenon in the systematization of educational and professional preparation and development of a civic position of young generation, which actualizes a problem of finding effective mechanisms of the formation of an egalitarian personality of a teacher in order to harmonize the personal, professional and civic growth.

The aim of a national education is the priority of personal orientation in education, the development of the child as the subject of his/her own life, on a creative and self-sufficient personality, which corresponds to the formation of a creative, developing and non-discriminatory environment, relevant to the principles of parity and equality of the sexes, which ensures the full development of the individual, considering different characteristics (gender, age, disability, race, culture, religion, ethnicity, etc.).

Gender (parity) democracy is important because of the international acceptance and also of the internal dynamic of our country, the implementation of basic social programs, which improve the quality of life for two social and demographic groups – men and women, the deprivation of inequality between this sexes and the development of partnership between them, as an expression of social justice, the effective mechanisms of protection from the discrimination and so on.

In the White Book of the Council of Europe, there is an Intercultural Dialogue "Living together in equality and dignity" (2008) which defines the guidelines of peaceful coexistence in a free society for people of different races, religions and cultures. The division of social life into "male" and "female" as the old paradigm of "male domination - female subordination" goes back in time, because of its inefficiency in its various life spheres, starting from the micro-level of the family and ending with the macro level of the occupations' division, leadership position, the ideology of the state. It will enable us to deconstruct patriarchal gender stereotypes in people's minds, to form unbiased attitude to abilities and a status of a person independently of his/her sex, an orientation toward the fullest self-actualization of a person mastering any spheres of people's vital activity taking into account peculiar archetypes, namely features of the mentality of Ukrainian ethnos.

Gender relations characterize the degree of democracy in a society as they determine the division of roles in the political, socio-economic and professional lives.

However the historical experience proves that it is inefficient to solve the problems of human existence, human or national security using only power, scientific or technological methods without the changes in the social consciousness and culture. Such changes are possible only through implementation into the consciousness of people and culture a particular system of values and value orientations as a humanitarian component of social life security. Hence the study of person's gender identity formation in the ontogenesis is promoted by a social need to reveal the social and psychological factors of youths' gender

culture formation, the necessity to study the inner mechanisms of person's identification with certain patterns of gender role behavior as well as social life democratization and egalitarian values formation. The cultivation of gender parity as a strategic way of socialization promotes the necessity of the gender formation study from the point of view of various psychological approaches, particularly genetic and cognitive.

The achievement of gender parity in education is one of the important aspects of the machinery of national gender government policy. The system of high education is an important agent of gender socialization of young people, which can be built on the principles of gender parity, or, vice versa, contains some forms of gender inequality.

The *aim* of the article is to determine the key factors of developing an egalitarian personality of a teacher in the context of the realization of the Concept of the New Ukrainian School; conduct a gender audit at the university; developing and implementing gender and educational technics of formation of teachers' gender competencies.

1. The teorethical and methodological basis of a research.

The main mission of a teacher is developing the ideology of equal rights and opportunities of all children regardless of their sex. The president of the National Academy of Pedagogical Sciences of Ukraine V. H. Kremen' clarifies the concept "Child is in the center" which means respect of the child's personality, his/her individuality, creating the necessary conditions for formation and development of a child. This slogan should identify the activities of modern teachers in school and beyond" [Kremen, p. 412–413].

It is a question of recognizing the value of a childhood, personally oriented study, civic education, the implementation of the cultural function in the new developmental and educational paradigm and the egalitarian socialization of the child, the formation of his/her educational, social, cultural and other competencies, values and tolerance, gender competencies, which are necessary for self-determination and conscious choice of life determination; the realization of the cultural and creative function in the new, developmental and educational paradigm, systemic and subject approaches to the gender socialization of a child on the basis of humanism and democracy; the expansion of the cultural and mental space for all participants of the pedagogical interaction on the basis of democratic values, in order to credo "live together in equality and dignity" (The White Paper on intercultural dialogue by the Council of Europe) "to join the globalized "We" and at the same time preserve the original life world, feeling own national "I" (M. Popovich) [Popovich, p. 16].

The "gender matrix" of Ukrainian pedagogics is a basis for the recent standards of equality of both sexes; the formation of an egalitarian outlook of parents and teachers; the creation of a positive model of education of girls and boys. The famous Ukrainian teacher Vasyl Sukhomlynskyi said: "The education of true men and true women begins with the formation of their civil personality qualities". These words isa guide to gender education of children.

It is known that the functioning of a gender constructs should be analyzed on egalitarian (partner) or dominant (traditional) sex-role models. An egalitarian (from the French "egalite" – equality) model of a gender is behavior is popular in societies where equality of sexes, interchangeability, gender sensitivity and tolerance are promoted at all levels of socialization – from family education to the state ideology.

The humanistic and existential paradigm in the analysis of gender development of person, describes the hierarchy of values and the orientation of his/her self-actualization as a representative of determined sex in various spheres of human existence (K. Woityla, A. Maslow, C. Rogers, V. Frankl).

In our opinion such phenomenon is vividly represented within the humanitarian and phenomenological approaches, and it enables to answer the question about the development of subjectivity, self expression and acquiring of "self" in the contradictions of life. Although the practical aspect of the gender identity question is quite "open", however it has a profound inner layer, as it encompasses a lot of unrevealed psychological mechanisms of personal and spiritual development of a human.

Gender identification plays an important role in the formation of gender self-consciousness of a person, in formation of his/her self-image, and acquiring the requirements for gender-role behavior. Gender identity characterized as being marked by awareness of gender-role cultural standards as well as social and psychological instructions, accepting the traditional or egalitarian modes of behavior, formation of ego-structures in the continuum of masculinity and femininity, by representation of the individual experience of self-knowledge and attitudes to evaluating oneself and others, by agreement and balancing between the real and ideal gender Self.

The category "gender" has been examined in the context of S. Bem's psychological conceptions, gender schemes and lenses theories, in particular polarization, androcentrism and biological essentialism, in which a certain analogy with L. Vygotsky's conclusions on mentality "sign mediation" can be observed, when a cultural sign becomes a means of individual's subjective behaviour in the period of his/her becoming an adult. Socialization assists child's entrance into the gender culture of society. Moreover, socialization is the most important factor which defines construction of child's gender identity, subjective activity in the process of gender "I" self-formation in relation to the age, closest development zone and main kind of activity, new formations in the psychological development.

The author's model is based on understanding "gender identity" as a crucial personal formation in the structure of sex self-consciousness, which is manifested in different interactions and attitudes. Masculinity and femininity as individual's attributes are the basic categories in the analysis of sex-role "I" formation. In addition, gender orientations (traditional or egalitarian) are important indicators of individual's self-identification.

The young age is connected with gender self-determination, establishing of the behaviour fitting the gender role, and stable image of the "I" of men/women. As E. Erikson emphasized, "the young age is the most important period of the development, when the main crisis of the identity occurs" [Erikson, p. 98]. Uncertainty and indecision in gender identity are dangerous because it can hamper identity development.

2. Gender attitudes of youth.

Our hypothesis was that student (future teachers) is heavily influenced by both the traditional and egalitarian gender orientations in deciding on their private and public roles. Hypothesis was tested with Fisher coefficient, Mann-Whitney U-criterion, correlation coefficient and factor analysis. The most influential in the value system and perceptions of the future for both men and women are family roles; such roles are also dominant in the self-concept descriptions. Men view the ideal image of a woman in more traditional terms than do women themselves – women portray an ideal female as more intellectual and socially advanced. The findings show that while there are many similarities in self-views of young men and women, men is more oriented on traditional male values, whereas women maintain values of both traditional and egalitarian nature.

The results of content-analysis of the narrative "Who Am I" show the dominating gender roles in private family and public professional spheres of young men and women. As the cluster analysis shows, *gender belonging is realized through personal qualities.* We initially selected two large clusters. The first one determines the characteristics of the individuality of a person, such as: appearance, interests and hobbies. The second cluster refers to social descriptions, such as: public-political, professional and domestic roles.

We found no meaningful gender differences in such spheres as professional and domestic roles, interpersonal and gender qualities, hobbies and interests, which suggest the prevalence of personal, individual self-determination of the "I" in the samples of both sexes. At the same time the statistically meaningful (Student's t-criterion) differences were found in such subjective descriptions as the physical I ($t=-3,74$ at $p=0,0004$), emotional sensitivity ($t=2,17$ at $p=0,03$), confidence in oneself ($t=-2,56$ at $p=0,01$) and ability for self-expression ($t=3,59$ at $p=0,00$).

The role of physical attractiveness in descriptions of the physical I is considerably higher (almost 4 times) for young women. Another sex difference in the image of the I is emotional sensitivity (4,86 for young women : 3,26 for young men) which demonstrates higher meaningfulness of emotional sphere for personal self-determination of young women. We explain such sex differences with different level of adaptation of young men and women to the new social roles of a student and future professional. Young women acquire more confidence in themselves, which, in our opinion, is influenced by a) young women's higher social activity; b) fewer gender expectations in relation to young women's social roles and considerably more expectations in relation to the realization of masculine roles by young men.

In this age male students begin to feel the pressure of gender stereotypes of a bread-winner, protector etc. while having few possibilities for financial self-realization. The sex difference in the meaningfulness of self-openness (as for young women, its level reaches the mark of 8,48, while for young men it is 4,39) is possible to explain by the influence of gender socialization, as the society expects more empathy from young women. The statistical analysis of descriptions in the images of the real and future I shows similarities of the personal self-determination in different spheres of vital activities of young men and women.

In the ratings of meaningfulness of different spheres of self-determination, the sphere of professional self-realization takes the leading place. In the image "I am today" the meaningfulness of professional sphere for young men is lower in comparison with the image "I am in future". At the same time in the image of the future I for young women the leading place is taken by the emotionally expressive sphere. These findings are confirmed through the analysis of descriptive self-characteristics presented by young men and women in narratives "I in 20 years". The qualities which are marked by young men as necessary for a woman have truly feminine character, for example, "faithful", "beautiful", "tidy", "thoughtful", "tolerant", "tactful", "complaisant". The responses for young women include unique feminine qualities, for example: tenderness, meekness, love, and children. The anti-ideal qualities are completely opposite to afore-named ones, as, for example, "negative", "fickle", "bad hostess", "has bad habits related to alcohol and smoking". It is not surprising that 94 per cent of young people think that the image of an ideal woman has to have traditional nature, and 95 per cent consider that the image of a real man must be of traditional nature, too.

We should note that nothing is mentioned about the wife as a professional, statesman, about her possibilities to take up sports or hobbies. Only 40 percent of young men consider that professional employment of a wife is possible, but not obligatory, and only on the condition of "a good job", "that she is able to devote more time to her family and children".

Similar options are traded in the narratives by young women where they describe their future: "I am cheerful and tidy when I meet my husband when he comes from work. I gave lessons of English to my children, took them to the pool, and while they were there, I visited the fitness center", "I still have a slender body and look young. I have time to take care of myself, visit a beauty salon"; "My wife brings me coffee in bed. She has time for sports and for the care of all family members". he development of gender identity at the age of a young adult occurs on the basis of both conscious self-determination in continuum of masculine-feminine behavior and choice of individual meanings of gender roles (a considerable percent of young men and young women reached the highest degree of individual identity in j. Marcia's test and the androgenic models of gender role behavior in accordance to S. Bem's questionnaire as well). Number of students that "lag behind" at the level of diffusive identity (most of them are males), which demonstrate the sex-determined behavior, or show complete confusion in relation to the gender role.

Although the majority of respondents of both sex esshowed traditional orientations, the comparative analysis of their structure (from the point of view of the cognitive emotional and behaviour constituents of gender self-determination in S. Bem's questionnaires show the signs of destruction of bipolar gender orientations of student youth. The proof of it appears in the similarity of repertoire of social roles in the self-determination of "I am a man/woman" and also in the context of narratives "Who Am I" (today). The gender roles selected by young men and women do not fit the "Procrustean bed" of their patriarchal division, as they contain quite a lot of egalitarian constructions of self-determination in professional occupations, identification, and communications. The future of students in their gender scenarios of life can also be described from the point of view of the ambivalent.

The general sample was 170 respondents – 86 young women and 84 young men between the ages of 18-21 enrolled in a pedagogical university. The test showed high reliability due to internal consistency: the coefficient of correlation between the scales of egalitarian and traditional values is folds r=-0,95 (p=0,0001).

Majority of males in the sample showed agreement with the following statements: "there are a lot of words and phrases which can not be pronounced by women but they are allowed to be spoken by men" and "women must not visit the same places which are visited by men, and women must not have the same degree of freedom as men". The students are aware of the myth that the "weaker sex" is subject to psychical disorders, depression and anxiety more frequently. These beliefs found the confirmation in the agreement with the statement "Women are too sensitive to become good surgeons". The apotheosis of traditional opinions of young men was their denying the professional suitability of women for various types of activities "Woman must recognize their intellectual narrow-mindedness in comparison with men". Young women showed more egalitarian views than did men in relation to physical attractiveness of both sexes to taking care of the figure, keeping a healthy way of life etc. For example, women showed greater agreement with statements "A modern woman is obliged to care about her figure no more than her husband cares about his" and "Youth and beauty of a woman are the main guaranty of her happiness".

The analysis of results of the questionnaire based on M. Jenkins' method showed that most young men and women share traditional (patriarchal) values to some degree [Hyde]. However, there were sex differences in gender orientations of young men and women. Young women are more oriented on the egalitarian relations in the domestic sphere, in sex behavior, marriage and pre-marital behavior. Traditional views of young men refer to the social and politic legislative sphere.

Bipolarity of judgments of young men and young women about traditional and egalitarian value are presented in picture 1.

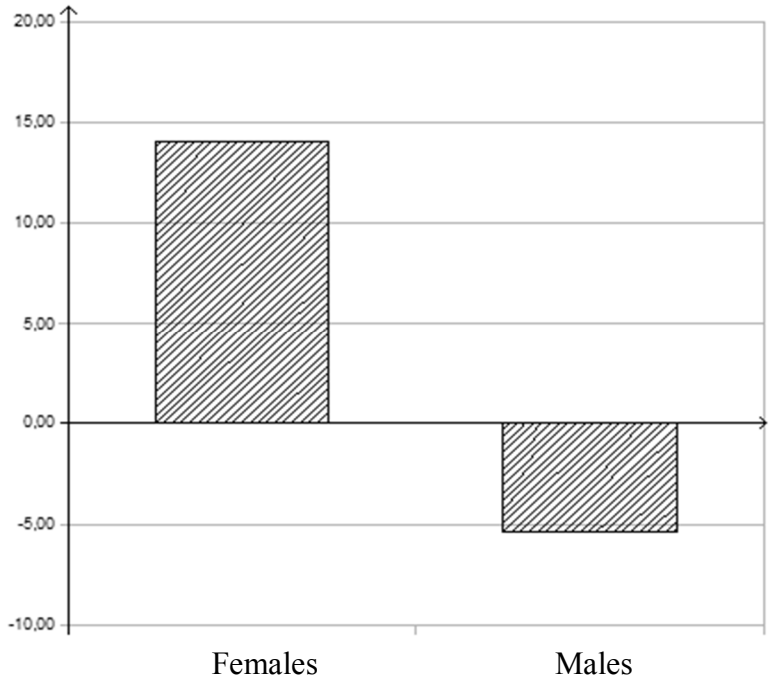

Fig. 1. Bipolarity of the division of gender orientations of student youth in sex selections

Traditional values are directed against the expansion of space of a woman in relation to the professional activities. Women students admit egalitarian with men in the domestic sphere, but they share patriarchal opinions in relation to financial and legal responsibility of a husband.

3. The results of gender audit of the university.

The achievement of gender parity in education is one of the important aspects of the machinery of national gender government policy. The system of high education is an important agent of gender socialization of young people, which can be built on the principles of gender parity, or, vice versa, contains some forms of gender inequality. Therefore, the project "Gender mainstreaming in higher educational establishments of Ukraine" and its implementation were positively perceived by the administration of the university, because gender audit allows to explore the compliance of the principles of gender equality in the university and determine the ways of implementation of gender-sensitive technologies in the practice of high school in order to create egalitarian personality of future teachers and gender culture of students.

The current regulatory framework of higher education in Ukraine and statistical indicators give reasons to consider higher education, de jure, with minimal manifestations of gender inequality. However, de facto, there is a gender asymmetry.

The goal of gender audits is analysis of the universities in gender discourse of public policy. The survey includes: 130 teachers (64 women and 66 men) and 298 students (180 female students and 118 male students).

The tasks of G. A. are:

1. Explore the availability of gender resources in the system of equality - inequality (policy and strategy of education, training programs, institutional practices, methods of teaching and forms of assessment, the nature of gender interaction, etc.) in order to make a critical analysis of the university's experience for implementation of complex gender approach;
2. Determine, whether personnel policies of the university is gender-sensitive in general and in specific substructures;
3. Determine the corellation of men and women on different management ranks and level of feminization and masculinization of faculties and specialties;
4. To conduct a qualitative analysis of statistical indicators of gender equality with their further interpretation;
5. Spread of information about methods, rules and attitudes to gender problems of students and professors of universities, their views and installings in the system of democratic or patriarchal coordinates;
6. Outline the problem sphere of deepening the gender studies in the academic field and define general guidelines for implementation of gender components in higher school.

In the research we were interested in the dynamics between professional and private spheres for young men and women in the image of future. It was discovered that young men are oriented on building their career in identification of the future I to a greater degree, while young women show greater dependence on the domestic sphere. Both in the I-present and in the I-future the dominant tendency is professional activity for young men and domestic activity for young women. Gender social modeling has been revealed in stereotying of thinking and conscience of sex and age samples concerning different spheres of activity and choices of occupations, building up a career and its connection with family roles, prestige and social status etc., which is a confirmation of existing phenomena of "glass ceiling", "dual employment", and inferiority position of female faculty. The gender imbalance is manifested in "masculinization" and "feminization" of students body (the significant predominance of female students (28,6%:15,5%). The subsequent career according to students' sample is directly divided into traditionally "female" and "male" that do not promote the development of the subjectivity of a person, his/her creativity and competitiveness, successful self-realization.

In particular, more skeptical attitude of male faculty to equality of sexes has been noted; validation of a problem of inequality by biological, innate peculiarities of sexes; predominance of androcentrism in communication that leads to gender insensitive attitude in subject-subject interaction on all levels of higher educational institution, inadequate analysis by the youth and staff of the educational institution of gender discrimination practices (nearly half of the male respondents pointed out indulgent and patronizing attitude of faculty to female students, less exacting and more friendly attitude to them. Almost equal number of male and female respondents has pointed out more benevolent attitude to male students at university. That is, in their opinion, connected with feminization of academic groups and special attitude to considerably smaller number of boys).

4. Psychological model of professional development oh future teacher.

The author's model is based on understanding "gender identity" as a crucial personal formation in the structure of sex self-consciousness, which is manifested in different interactions and attitudes. Masculinity and femininity as individual's attributes are the basic categories in the analysis of sex-role "I" formation. In addition, gender orientations (traditional or egalitarian) are important indicators of individual's self-identification.

Psychological model demonstrates such principles of gender identity construction: interconnection and interrelation of social and psychological processes of sex-role self-identification on social and individual levels; behaviour differentiation based on individual's sex; asymmetry; polarization-opposition; hierarchy; andro-feminocentrism or egalitarianism, sexism as a biased and stereotyped attitude; evident and "hidden" discrimination, gender stereotypes, etc.

Practical application of the model provides a possibility to assume that:

- the phenomenon "gender identification" is a universal mechanism of integration and differentiation of various identifications in the individual's development ontogeny. This mechanism functions as an individual's values and sense self-identification with representatives of the same sex, with the behaviour and performance of social and family roles typical of this group of people;

- sex-role identification is an index of personal maturity, a result of universalization and individualization of human values, equality, democracy, and humanism.

Gender discourse is a new area of educational technology in schools and universities, which stimulates mental space to look for a cultural development in all participants of pedagogical interaction "parent – child – teacher". It builds gender partnerships in humanization of social relations.

Gender in the home pedagogical inheritance is the determination of equal participation of the sexes in the educational process, in the preparation for the realization social roles in the family and in the society, opportunities of achieving successes in any spheres of social vital functions. Gender culture as the system of forms and methods of the organization of the educational process promotes the becoming of the personality of a woman and a man as even and equal in human rights creatures. Gender pedagogics in the context of the humanistic approach is a complex of knowledge and methodological approaches, directed at the acquaintance with basics of principles of the gender education which has to grade the influence of patriarchal stereotypes in favour of the individual way of the development of a personality. The essence of the gender competency orients a teacher at conducting of educational informational and practical work, directed at the theoretical and applied solution of the current problems of gender character. Pedagogical direction of the gender development means the promotion of the conscious self-determination of young people in the building of the parity intersexual relations on the basis of individual makings, interests and inclinations.

5. The formation of gender competence of future teachers.

Gender competence ensures the success in both spheres – autonomous activity (give a sense of inner harmony), and the ability to build harmonious relationships with others, using gender technology for orientation in modern life. In turn, self-orientation of boys and girls is determined by gender issues: how to choose the right basis for the family relationships, which opportunities and limits has the traditional and egalitarian gender roles, the gender inequality may cause the refusal from the beloved profession, it may also cause the absence of the representatives from the demographic groups in leadership positions in the legislature, in politics etc.

Gender competence may be named as "key competence", because it develops the ability of self-realization and self-improvement, the ability to build partnerships, to be competitive in the market, to maintain the democratic principles in the private and social life.

The implementation of gender-educational technologies enables youth to acquire gender knowledge, to build and test their "Ego" in different situations, to practice and implement the principles of partnership, gender equality. Gender competence ensures the success in both spheres – autonomous activity and the ability to build harmonious relationships with others, using gender technology for orientation in modern life.

The activities of the School of Gender Equality (SGE), established at the Center for Gender Studies TNPU, named after Volodymyr Hnatiuk, became the basis for development of comprehensive educational program for youth "Gender culture of youth", namely:

– to develop fundamental and applied gender studies;

– to apply gender and education-oriented technologies based on the concordance of the principles of progressive ethno-cultural traditions of the person-centred and egalitarian approaches;

– to develop and improve gender standards in education;

– to study the methodological bases of youth gender competencies formation as a peculiar system of gender knowledge and practices adequate to sex parity principles in the context of modern European integration processes;

– to expand the network of gender-oriented educational establishments and public organizations on the regional, national and international scales;

– a systematic module of gender enlightening of teaching staff, different forms of developing and correctional work with students, parents, teachers have been developed and implemented in educational establishments of different levels.

– to promote the activities of legislative and executive authorities in the state gender policy;

– to prepare young Ukrainians for family life and responsible parenthood.

Conclusion.

This research shows that young women are more oriented on the egalitarian relations whereas young men tend to endorse traditional gender orientations. Gender identity in both samples has perceptibly stereotypical nature, although less so among females.

Understanding and developing in young Ukrainian generation skills of gender competencies will enable to form impartial attitude towards the capabilities and status of a person regardless his/her sexual belonging and will give the possibility to orient to the fullest self-realization of a personality in mastering any sphere of human life activities. Reference gender identity in both selections has perceptibly stereotyped nature. Girl-students show liberal options more often, they support the equal division of roles in a family. Inheriting old stereotypes and accepting new, own values, modern students remains on the cross-roads of gender self-determination. Gender differences were found in the functional and industrial values wherein males place more emphasis on social comparisons and self-control.

The traditional gender identification of young women is displayed mostly in the spheres of their life activities connected with reproductive and educational functions, and as for young men, it is displayed in the execution the functions of a bread-winner, defender. Both sexes come under the influence of sexual stereotypes in the field of the development of individual contacts.

This research shows the necessity of creating and implementing the gender policies based on the psychological principles of parity and androgyny of sexes, and on self-development and full vital realization of an individual. Development of gender competencies among young Ukrainians will enable to form a fair attitude towards the capabilities and status of a person regardless of his/her sex and create the possibility for maximum self-realization in mastering some sphere of life activities.

Inheriting old stereotypes and accepting new, own values, modern students remains on the cross-roads of gender self-determination. Girls are more oriented to the egalitarian relations, than boys, in whom traditional gender orientations prevail. Reference gender identity in both selections has perceptibly stereotyped nature. Thus, life self-determination of youths is more conservative, stereotyping: “masculine” one is the activity in social, politic economic spheres, and everything “feminine” continues to be associated with a family, home duties, education of children. Girl-students show liberal options more often, they support the equal division of roles in a family; they want equal rights and possibilities for personal self-realization. These tendencies allow to state the growth of subject feminine potential, outline the psychological prospects of future life creativity of girls-students as the challenge for the traditional stereotypes.

Almost the same volume and symmetry of gender prejudice as to both sexes has been found out. However, men (faculty and students) take stronger sexist positions than women.

The extension of a range of information and educational component of a gender approach (gender audit tools design, the statistical data collection, tendencies and phenomena, such as "acquired helplessness", "fear of success", "glass ceiling" etc. description and analysis; antidiscriminatory practice , its approbation in all-Ukrainian network of the gender educational centres) will assist further institution development of gender in social and humanitarian space.

The egalitarian socialization is congruent with personal-centred (non-violent) approach in education, as the most progressive and productive community of equal individuals of different sexes. In this sense the initial assumptions of personal egalitarian approach as a basic strategy of socialization and education cover the implementation of the idea of equality of sexes and their interchangeability; indetermination of biological belonging of gender roles; approval of egalitarian ideology: gender competence as awareness of sex-role norms of conduct, gender sensitivity as means of creation conditions for the general development of the representatives of different sexes despite of gender stereotypes and prejudices, the ability to solve educational problems from the point of egalitarian gender ideology and gender tolerance as respect of fundamental rights and freedoms.

The gender competence of a psychologist and a teacher is a kind of professional knowledge that determines their position in theoretical, methodological and practical professional activities.

Gender teacher’s knowledge includes the following ideas: bipolar construct of gender (polarization of masculinity-femininity as a rigorous definition of sexual roles in the patriarchal culture); androcentrism as a tradition of subordination of the female and domination of the male; egalitarian (partner) gender construct; sexism as a biased and stereotyped attitude; “open” discrimination as a practice of different educational programs for boys and girls; “hidden” discrimination as a model of the formation of gender stereotypes in the content of educational materials; stereotypical opinions about gender among teachers.

The future directions of research are the development and implementation of innovative gender-educational techniques to educational institutions for prognostics of the equating of self-realization opportunities of youth as a strategic direction of their egalitarian socialization and providing of the national mechanism of the state gender policy.

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INNOVATION STRUCTURE OF PRIORITY DIRECTIONS OF DEVELOPMENT OF UKRAINIAN HIGHER EDUCATION INSTITUTIONS

Abstract*. The development of higher education institutions (HEI) in Ukraine is associated with the spread of globalization processes, increased competition in the education market and reduced budget financing. Under these circumstances, the need for a development strategy that would substantiate the long-term prospect of HEI to achieve its mission is particularly urgent. The main components of the innovative structure of development strategy formation with the consideration of modern features of the functioning of domestic HEI have been developed. The main directions for strategic development of HEI are proposed. It is proposed to include the following in their composition: research work; international positioning of the university; the quality of scientific and pedagogical workers; material and technical support of the educational process and scientific activity; educational activity; student contingent; management system at the university; informational support of educational process and scientific activity; social mission of the university. For each direction, specific goals and objectives have been developed. The measures for each strategic task are substantiated. The development and implementation of the strategy for the proposed innovative components will enable the HEI to compete not only on the domestic market, but also on the global markets.*

Introduction.

Post-industrial stage of society's development, accompanied by an increased role of information, the introduction of the latest information technology requires the quality management of high-quality specialists. Graduates of HEI are the basis of ensuring innovation and technological development of Ukraine. Ensuring the quality of higher education, the active pursuit of scientific and innovation, international activities are the main objectives of the HEI. The achievement of these tasks is possible by developing an appropriate strategy for their development.

Theoretical and methodological aspects of developing strategic decisions in conditions of increasing competition in the domestic and global markets for educational services were studied by such scientists as: O. Alimov, V.Andrushenko, M.Bublyk, I.Gryshchenko, M. Denisenko, I.Kaleniuk, O.Kuzmin , O.Kukhlenko, M.Martinenko, A.Nalivayko, M.Stepko, I.Tarasenko, L.Fedulova, Z.Shershnyova, L.Shulgina and others.

In today's socioeconomic conditions, which are determined by the globalization of the educational services market, the need to stimulate the transition of the economy to the model of innovation development, as well as the shortage of budget financing of the HEI, requires the need for in-depth research aimed at formulating recommendations for defining the main goals, objectives and measures to ensure strategic development of HEI. The arguments presented and the following research results reflect the relevance of the chosen topic of research.

1. Innovative structure of the strategy for the development of HEI.

The strategy of the development of the HEI is aimed at increasing their competitiveness among domestic and international HEI, ensuring presence and maximally promoting their position in international and domestic ratings. The strategy is aimed at stimulating the scientific and scientific-pedagogical workers of the HEI to actively engage in scientific activity, to increase the quality level of scientific and technical, innovative and methodological activities, to ensure the organization of the educational process, as well as to complete the improvement of scientific effectiveness.

According to the results of the analysis of literary sources [1-8] on the research problem, 11 major strategic directions of the development of the HEI were recommended: research work; international positioning of the university; the quality of scientific and pedagogical workers; material and technical support of the educational process; material and technical support of scientific activity; educational activity; student contingent; management system at the university; informational support of the educational process; informational support of scientific activity; social mission of the university.

2. Building components of innovative structure of the development strategy HEI.

Strategic goals of HEI in Ukraine in the field of research work (R & D) are recommended to focus on increasing the level of scientific research and focus on the intensified development of applied research of regional, national and international importance.

One of the main strategic goals of the development of R & D in domestic HEI is to ensure an increase in the rate of effective R & D applications. In this regard, appropriate measures should be implemented to organize effective work in this area, namely: analysis and monitoring of the effectiveness of applied research results; increasing the effectiveness of applied R & D through the implementation of interdisciplinary projects; financial support for advanced development; formation of the subject of applied R & D; systematic formation of scientific directions of departments, directions of cathedral research and the topics of dissertation research taking into account the needs of the real sector of the economy and the priorities of the development of the scientific and technological sphere, etc.

Priority is given to the strategic task of improving the financing conditions for research. In this case, the possibility of attracting for the budget projects of university staff for individual contracts without any restrictions is considered. It is recommended to include measures to improve the conditions of remuneration, the tariff disbursement scheme of the university's employees, and the procedure for setting surcharges for the implementation of scientific research.

The priority strategic direction of development of scientific research in HEI is to ensure the absolute correspondence of the formed proposals to the real needs of the market, business and new technologies. In the direction of improving the commercialization of intellectual property objects, it is expedient to implement measures of strategic importance in ensuring the growth of the number of protected intellectual property rights objects and licenses for the implementation of relevant developments. Equally important strategic task is the need to open promising scientific specialties in doctoral studies and post-graduate study of HEI.

The development of scientific research is not possible without increasing cooperation with potential customers (domestic and foreign organizations, enterprises, state authorities) in the direction of implementation of economic-contractual topics, the provision of information and consulting services, etc [11].

In order to promote the efficiency and effectiveness of the research activities of employees, postgraduates and doctoral students of domestic HEI, it is expedient to reduce the training load for individual scientific and pedagogical workers and departments that are most successful and successful in the field of research and development, which will further facilitate the creation of favorable conditions for development of research at universities.

Development also requires a system of stimulation of research and inventive activity of workers and students of domestic HEI, the effectiveness of which is one of the driving factors of strategic development of scientific research. The recommended strategic goals and tasks / measures (structure) required for the development of the R & D are given in Table. 1.

The main measures of strategic development of HEI in the context of international positioning are [1, p. 5-6]: "Implementation of the program of integration of HEI into the pan-European system of education; increasing the number of educational programs developed with participation and on the basis of experience of leading foreign HEI; increase of the number of foreign students, as well as students, lecturers and scientists who are studying, training and advanced training in leading foreign HEI; creation of the infrastructure of international scientific cooperation".

Table 1

Structure of strategic development of research work of HEI of Ukraine

Goals / Tasks	Activities
Increase in the proportion of effective applied research and applied research in the total number of R & D financed from the state budget	Analysis of the effectiveness of applied research results and selection (examination) on the competitive basis of the most promising ones for the purpose of financing development and commercialization
	Formation of applied research and development topics financed by the state budget, taking into account the needs of the real sector of the economy and the priorities of the development of the scientific and technological sphere.
	Improving the effectiveness of applied research and development through the implementation of interdisciplinary projects
	System formation of scientific directions of departments, cathedral research and the topics of dissertation research taking into account the needs of the real sector of the economy and the priorities of the development of the scientific and technological sphere.
	Analysis of the effectiveness of applied research results performed in previous years
	Financial support for advanced development
	Formation of innovation structure, creation of scientific park
	Formation of proposals for analytical general and sectoral developments, sociological research and consulting services
	Opening of new promising scientific specialties in post-graduate and doctoral studies
Improving the financing conditions for scientific (fundamental and applied) research	100% financing in accordance with requests for budget and fundamental research and development
	Possibility of attracting for the execution of budget projects of employees under individual contracts without restrictions
	Improvement of the ordering of wage conditions and the scheme of tariff discharges of employees
	Improvement of the procedure for installing surcharges
Full compliance of the proposals of HEI to the needs of business in new technologies	Strengthening the activity of establishing cooperation with the aim of concluding local contracts
	Expanding the range of service offerings to enter new markets
Improvement of the system of commercialization of objects of intellectual property rights and stimulation of inventive activity and technology transfer	Annual increase of the number of protected intellectual property objects and the number of licenses for the implementation of scientific and technical developments
	Annual increase of the number of implemented intellectual property objects
	Normative reduction of the settlement and teaching load for the departments and for the corresponding teachers with the highest indicators in scientific and international activity

Source: proposed by the authors on the materials [1-8]

The priority direction of the strategic development of the HEI is the implementation of the task of entering the list of the best in the world HEI rating, as well as the annual strengthening of their positions in these rating systems. In order to realize this strategic goal, it is necessary to provide all the necessary conditions for further enhancement of the positions of the Ukrainian HEI in international ratings.

According to the documents [1-8], one of the main tasks in the direction of increasing the competitiveness of domestic HEI is: 1) strengthening the international publishing activity of HEI workers; 2) increase of citation rates of university employees in international science-computer databases; 3) increase of H-indexes of universities; 4) international recognition of periodicals of universities; 5) bringing of university scientific publications to international requirements; 6) the introduction of university publications to the international science and technology databases of Web of Science and Scopus; 7) publication of scientific papers of university employees in high impact magazines; 8) raising the requirements for the quality of publications of university employees; 9) strengthening the expertise of publications in university publications; 10) increasing the scientific effectiveness of departments in general and scientific and pedagogical workers in particular; 11) increase of the share of publications of university employees in co-authorship with foreign scientists and authors' groups; 12) increasing the number of project proposals for international grants; 13) increase in the share of research and projects carried out by international teams; 14) ensuring the attraction of foreign lecturers, specialists to work in universities and the creation of appropriate conditions for this; 15) the growth of the number of foreign students and postgraduate students in domestic universities; 16) ensuring the effective work of the joint Ukrainian-foreign faculties, departments, programs; 17) increase of the level of proficiency in foreign languages of employees, postgraduate students, doctoral students and students; 18) raising the level of international mobility of teachers, postgraduates, doctoral students and students; 19) ensuring active cooperation with the most well-known international students' structures; 20) ensuring the work of international summer schools in different directions; 21) "Collaboration of universities with international organizations as well as national foreign organizations and others". The generalization of the recommended strategic goals, objectives and measures for the development of international positioning of HEI, is presented in the table. 2. Strategic development of domestic HEI is impossible without increasing the qualitative composition of scientific and pedagogical workers. Transformation in the qualitative composition of scientific and pedagogical workers of Ukrainian universities should be carried out in the following areas: 1) increase of the share of doctors of sciences and professors in the staff of scientific and pedagogical workers of the university; 2) increase of the share of candidates of sciences and associate professors in the staff of scientific and pedagogical workers of the university; 3) decrease of the average age of scientific and pedagogical workers of the university; 4) an increase in the number of young teachers (up to 35 years old).

Table 2

Structure of development of international positioning of HEI of Ukraine

Goals / Tasks	Activities
Improvement of leadership positions among HEI in Ukraine and in the world	The entry of HEI into the number of leading universities in the world in rating systems, the annual improvement of their positions
Introduction of English-language master's international educational programs for the training of specialists for attracting foreign lecturers	Achievements of 10-15 international programs, lecture courses
	Achievement of the number of foreign lecturers, specialists working in universities to 40-50 people per year
Ensuring international student mobility	Ensuring the growth of the contingent of foreign students-students, post-graduate students in the university in% of the total number of students, post-graduate students of universities
Ensuring the creation of joint Ukrainian-foreign centers, laboratories, structures	Creation and provision of joint Ukrainian-foreign structures (faculties, departments, programs) for "double diplomas"
	Creation and provision of English-language internet-portals of network interaction of scientific research areas.
	Ensuring the work of summer schools in different directions
Expansion of cooperation with international organizations	Implementation of various projects under the auspices of these organizations
	Expansion of cooperation with international university associations
	Activation of international cooperation with the most famous European student structures
Introduction of periodical scientific publications to the science-based databases of Web of Science, SCOPUS	The introduction of university publications to the international science and technology databases of Web of Science and Scopus
	Bringing scientific publications to international requirements, increasing requirements for the quality of publications. Improving the quality of publications expertise in university publications
Increase of scientific efficiency of chairs and scientific and pedagogical workers	Development of international cooperation, research and projects in international teams, strengthening of the international component in conducting fundamental research
	Submission of project proposals for international grants (collective and individual)
	Publication of scientific papers in high impact impact journals
	Increasing the share of employees' publications in co-authorship with leading foreign scientists and collectives
Increasing the level of international publishing activity	Implementation of the rating activity of employees
	Changes to the Provision of Material Incentives (in particular, to encourage employees who rank first in the ranking of publishing activity)
	Creation and provision of English-language inerne-portals of network interaction of scientific and other organizations working in the field of scientific research areas.
Increase of citation rates of university employees in world science-computer databases	Increase of the H-index and the number of periodicals included in the Web of Science and Scopus
	Involvement of university scientists to participate on a permanent basis in editorial boards of foreign journals, program committees of foreign professional conferences, seminars, committees, etc.

Source: proposed by the authors on the materials [1-8]

In the strategic perspective, it is necessary to introduce a system for evaluating the effectiveness of teachers, which will provide an opportunity to increase the overall level of responsibility of scientific and pedagogical workers for the results of their work.

Appropriate measures should be taken in the context of improving the efficiency and effectiveness of undergraduate and advanced training courses by university professors. To this end, appropriate training programs should be developed, and internships and advanced training courses should be introduced, which will greatly enhance the quality of such training and will positively affect the level of professional practical and theoretical training of teachers.

Special attention in the strategic context should be devoted to strengthening and developing scientific contacts, which is reflected in measures for the development of international cooperation, the involvement of scientific and pedagogical workers in carrying out scientific research of fundamental and applied nature in the composition of international scientific collectives, etc. An important stage in the strategic development of the HEI of Ukraine is to provide and strengthen the international mobility of scientific and pedagogical workers of universities.

In order to improve the quality of teacher training, it is important to have borrowed experience in other foreign universities, which will allow to obtain advanced teaching experience at foreign universities and get acquainted with the practice of the functioning of the international law. Further strategic development of the qualitative composition of scientific and pedagogical workers is impossible without the involvement of leading foreign teachers to the staff of universities, which plays one of the roles in international positioning and rating of HEI.

To ensure the improvement of the quality of scientific and pedagogical workers in the strategic direction, it is necessary to increase the level of responsibility at the stage of selection of candidates for admission to the postgraduate and doctoral studies, as well as with the preliminary examination of their dissertations. The recommended structure of the development of the quality of scientific and pedagogical workers of the HEI of Ukraine is given in the table. 3.

Another important strategic direction for the development of the HEI of Ukraine is the improvement of material and technical provision of the educational process, which should take place in accordance with [1, p. 4-5] in the following seven areas: 1) "acquisition of modern high-tech teaching and laboratory equipment and technical means of training; 2) capital and current repairs of educational buildings, technopark, student dormitories and housing stock, educational-geodesic landfills and recreation centers; 3) development of publishing facilities; 4) landscaping of territories; 5) implementation of energy saving measures; 6) construction of a modern educational-scientific complex, student dormitory, social housing of the hotel type; 7) educational and sports multifunctional complex ".

Table 3

Structure of strategic development of quality of scientific and pedagogical workers of the HEI of Ukraine

Goals / Tasks	Activities
Strengthening the qualitative composition of scientific and pedagogical workers of the university	An increase in the proportion of full-time scientific and pedagogical workers from the number of doctors of sciences, professors
	Increasing the share of full-time scientific and pedagogical workers from among candidates of sciences, associate professors
	Providing for the reduction of middle age scientific and pedagogical workers
	Ensuring an increase in the proportion of young teachers
Increasing the level of responsibility of scientific and pedagogical workers for the results	Development and implementation of a system for assessing the efficiency and quality of teachers' work
	Increasing the level of responsibility during the selection of applicants for admission to postgraduate and doctoral studies and at the stage of preliminary examination of their work
Improving the performance of continuing education courses or internships by university professors	Organizing and passing internships and continuing education courses with a break from the educational process in leading companies and institutions, in particular international
	Introduction on the basis of the pedagogy department of the compulsory training program for regular teachers who are involved in scientific and pedagogical work for the first time
Development of scientific contacts	Ensuring the maximum involvement of scientific and pedagogical workers with scientific degrees prior to carrying out scientific researches
	Development of international cooperation, joint research and projects within international teams
Involvement in scientific and pedagogical work of foreign teachers	Implementation of the mechanism for attracting foreign teachers to the scientific and pedagogical work of at least 5% of the total staff of the faculty (TSF) (25% world-class university) with a working period of not less than three months, as well as sending on a similar basis to foreign universities not less than 5% of the total TSF state

Source: proposed by the authors on the materials [1-8]

A strategic measure aimed at improving the material and technical support of the educational process is the implementation of a program of measures for energy saving and energy saving in domestic universities.

In order to improve the conditions of study, housing and social conditions of the students, it is necessary to improve the university funding system, which involves introducing the practice of involving such businesses in business, private capital, alumni associations, partners, sponsorships, etc. This will increase funding aimed at providing favorable conditions for the educational process and the residence of students in hostels, modernizing the laboratory base, improving the landscaping, and so on.

The generalization of the recommended strategic goals and tasks, as well as the measures necessary for the development of material and technical support to the educational process of the HEI of Ukraine, is presented in the table. 4

Table 4

Structure of strategic development of material and technical support of the educational process of the HEI of Ukraine

Goals / Tasks	Activities
Ensuring the construction of student dormitories and their reconstruction	Construction and reconstruction of student dormitories
Carrying out repair works in educational buildings and dormitories	Ensuring favorable conditions for conducting educational process and living students in hostels
Implementation of the Energy Saving Action Program on Energy Saving at Universities	Significant reduction of consumption of heat, electricity, water, natural gas
Ensuring the implementation of measures for the improvement of the territories of HEI	Improvement of territory improvement
Modernization of the laboratory base of the training process	Modernization of the laboratory base
Improvement of equipping of universities with modern computer and network equipment	Providing universities with modern computer equipment and network equipment
Improvement of material and technical support of sports facilities of universities and objects of social and cultural purpose	Improvement of material and technical support of sports facilities of universities and objects of social and cultural destination
Improvement of housing and social and living conditions of students	Improvement of housing and social and living conditions of students
Improving the funding system of universities	Involvement in the financing of private capital of HEI, business structures, etc.

Source: proposed by the authors on the materials [1-8]

The strategic objective of improving the logistics of scientific activities is to strengthen and develop the material and technical application base, which is related to the implementation of the following measures: 1) financing of the formation of a modern application base for the implementation of scientific research at the expense of budget funds; 2) financing the provision of the formation of a modern application base for the implementation of scientific research at the expense of special funds; 3) material and technical support for the creation of the Information Support Center; 4) "the organization of open access of university employees to scientific electronic resources and electronic databases of Web of Science and Scopus" [1-8].

"It is necessary to acquire and develop computer and telecommunication equipment, software for scientific research", which will allow to modernize the laboratory base [1, p. 5]. The recommended structure of the development of material and technical support for the scientific activity of the HEI of Ukraine is given in Table 5.

Table 5

Structure of strategic development of material and technical support of scientific activity of HEI of Ukraine

Goals / Tasks	Activities
Improvement of material and technical application base	Allocation of budgetary funds for capital expenditures to provide a modern application base for scientific applied research and development, as well as fundamental research
	Provide a modern application base for scientific research by allocating funds from the special state budget fund, forming appropriate criteria for determining the units for which such equipment will be procured
	Organization of access of university employees to scientific electronic resources and electronic databases of Web of Science and Scopus
	Material and technical support for the creation of a Center for information support (project office) with advisory functions on the preparation of project proposals for international scholarly grants
Technical modernization	Modernization of the laboratory base of scientific research

Source: proposed by the authors on the materials [1-8]

The strategic development of the educational activities of domestic universities is aimed at improving the quality of education. The main strategic goals of the qualitative development of educational activities of Ukrainian universities are: 1) development and implementation of the latest advanced methods and forms of educational activities to ensure the training of highly skilled specialists; 2) international recognition of the quality of education and educational services, as well as the provision of international cooperation in the field of educational activities.

The development and implementation of the latest advanced methods and forms of educational activity in the strategic context requires the implementation of the following measures: 1) diversification of educational programs and further development of degree education; 2) improvement and development of the system for assessing the quality of training and certification of specialists; 3) improvement of information support for the implementation of the educational process; 4) improvement of educational and methodological support for the implementation of the educational process; 5) improvement of the level of practical training of university students; 6) ensuring the further employment of university graduates; 7) improvement of the quality of providing post-graduate education services; 8) the opening of new directions of training, specialties, specializations; 9) increasing the number of teaching courses taught in foreign languages; 10) ensuring international certification and international recognition of engineering training programs; 11) the establishment of joint training centers, laboratories, educational and production complexes in cooperation with leading companies, scientific institutions and other educational organizations; 12) Ensuring the possibility for employers to participate in the

process of developing training programs for relevant specialists; 13) ensuring international recognition of educational training programs at the university; 14) ensuring the employment of graduates of the university in accordance with the concluded agreements and orders.

After analyzing Ukrainian traditions and successful European experience in order to ensure the continuity of content in the system of graduate higher and postgraduate education, the author of work [9] substantiates the introduction of the concept of ecologization of the system of graduate education through the development of new courses in economics. Also, in the context of the development and improvement of the quality of the provision of educational services to the HEI of Ukraine, the issue of strengthening the image and rating position of domestic universities among international educational institutions in the field of education is important. Particular strategic importance is attached to international cooperation, which is manifested in: 1) borrowing international education from leading universities in the provision of educational services; 2) ensuring international student mobility through the implementation of double diploma programs and exchange programs; 3) involvement in the educational activities of universities in general, in particular, to the educational process of leading foreign teachers and scholars; 4) ensuring international mobility of university teachers within the framework of the implementation of international internship and exchange programs. The structure of strategic development of educational activities of the HEI of Ukraine is presented in the table. 6.

Having analyzed the development of educational and scientific activities of the HEI in the work [10], the authors believe that a significant reduction in the contingent of students reflects the emergence of crisis phenomena in the early stages of activity, and measures to support higher education in Ukraine should be aimed at ensuring the development and competitiveness of domestic HEI in the conditions of globalization and be focused on a longer-term perspective, that is strategically directed. Therefore, we recommend that the strategic task in the context of work with entrants and the formation of a contingent of students of Ukrainian HEI of Ukraine be considered optimization of the admissions to universities. An important strategic direction is work to strengthen professional orientation activities, and, in fact, the individualization of such work. It is necessary to ensure effective work on the "popularization" of specialties, which are carried out training of specialists in domestic HEI.

It is strategically important to ensure the systematic implementation of vocational guidance work among graduates of schools, gymnasiums, educational institutions of the I-II levels of accreditation, vocational schools, holding Days of acquaintance's acquaintance with HEI, etc. Another important direction of the strategic development of domestic HEI is the expansion of step-by-step training of specialists. Strategically, the university focuses on the following levels of training for university entrants [1-10]: undergraduate, postgraduate, postgraduate, advanced vocational training, etc.

Table 6

Structure of Strategic Development of Educational Activities of HEI of Ukraine

Goals / Tasks	Activities
Development and introduction of modern forms and methods of work, providing training of highly skilled specialists, maximally adapted to the tasks of practical activity	Development of degree education and diversification of educational programs
	Improvement of the quality system of training specialists and their certification
	Improvement of educational, methodological and informational support of the educational process
	Strengthening the practical training of students. Employment of graduates
	Improving the quality of postgraduate education
	Ensuring an increase in the number of areas of training with the teaching of disciplines in foreign languages
	Ensuring public-professional recognition and international certification of engineering training programs (certificates ENAEE-EUR-ACE)
	Creation of joint educational-scientific-production complexes, centers, laboratories with leading scientific institutions and companies, ensuring participation of employers in the development and implementation of curricula and programs
	Conduct officially recognized in the world by the relevant agencies of accreditation of educational programs, especially master's
	Recognition of the quality of education by employers by bringing up to 80% of the number of graduates employed on the basis of orders and agreements with employers
	Provision of continuing education through the development of 30 new integrated training programs "Master" - "Candidate of Sciences"
Ensuring international cooperation and recognition of the quality of education	Implementation of exchange programs and double diplomas with leading universities of the world, preparation of postgraduate students
	Involvement of leading scientists of foreign HEI in the educational process
	Ensuring the mobility of teachers and improving their qualifications through internships in the leading organizations of the world
	Raising the rating image of the university regarding the quality of education

Source: proposed by the authors on the materials [1-8]

The recommended strategic goals, tasks and measures for the development of the contingent of students of the HEI of Ukraine are presented in the table 7. Strategic development of the management systems of domestic HEI primarily involves the formation of an effective university management system, as well as ensuring their development in the long run. Implementation of such strategic goals implies, as shown in [1, p. 3], the formation of a list of relevant tasks: "improving the organizational structure of HEI as an educational, scientific-innovative complex and increasing the efficiency of its work; optimization of competences, differentiation of functions, powers and responsibilities of different levels of management structures and their adaptation to new conditions of activity; improvement of the legal and regulatory framework for management activities; development of information and communication infrastructure of the university on the basis of modern information technologies; introduction of electronic document circulation".

Table 7

Structure of strategic development of contingents of students of HEI of Ukraine

Goals / Tasks	Activities
Optimization of the amount of admissions to study at HEI, strengthening the individualization of vocational guidance work, expanding the step-by-step training of specialists	Orientation to four levels of entrants: undergraduate, postgraduate, postgraduate and additional vocational education.
	Ensuring the quality of staffing of the contingent of students. Professional guidance work
	Adjustment and revision of the nomenclature of training directions and specialties.
	Recording the most talented students at the national level
	Development of tools for identifying and maintaining talent for further recruiting
	Development of the preparatory department in the magistracy and graduate school
	Creation of training centers for admission to universities abroad

Source: proposed by the authors on the materials [1-8]

The formation of an effective system of management of a national university implies, in accordance with the recommendations [1-8], the implementation of the following tasks: 1) "improvement of management vertical"; 2) "development of principles and implementation of measures aimed at democratization, optimization and increase of efficiency of work of collegial bodies"; 3) "ensuring access to the institutions and departments to those segments of the information field that they need to carry out delegated powers"; 4) "ensuring the development of student and community self-government of the university"; 5) "creation of an automated control system and document circulation"; 6) "ensuring automatic exchange of non-confidential information streams"; 7) "ensuring the formation of a list of controlled indicators"; 8) "ensuring the formation of reports for new tasks"; 9) "tracking the dynamics of processes in time, by structural units, types of activities, curricula"; 10) "introduction of systematic sociological surveys at the university by students, pedagogues, other participants in the educational process"; 11) "ensuring the regular publication of the generalized results of sociological surveys, etc.".

Ensuring the objective possibility of further development of universities in the future is directly related to the development of an effective strategy for such development and its successful implementation. The recommended structure of the management system for the management of HEI Ukraine's is shown in the table 8. The main strategic guidelines for the activities of domestic HEI in the field of improving the information provision of the educational process in accordance with [1, p. 5] should include: 1) "acquisition and development of computer and telecommunication equipment, software for educational process"; 2) "providing students and teachers with broad access to world information scientific and educational resources"; 3) "information support for distance learning"; 4) "creation of electronic educational publications". The primary strategic goal of domestic HEI is "the formation of a single integrated, reliable and efficient information environment to provide high-quality educational services at the university" [1-8].

Table 8

The structure of strategic development of the management system of the HEI

Goals / Tasks	Activities
Formation of an effective management system for the HEI	Development of principles and implementation of measures aimed at democratization, optimization and increase of efficiency of work of collegial bodies, in particular, the administration and the Academic Council, as decision-making and management systems of university structural units
	Development of student and public self-government
	Creation of an automated control system and document circulation by: the establishment of a list of controlled indicators, requirements for periodic fixation, in order not only to meet the requirements of traditional reporting, but also to enable the formation of information blocks for participation and international programs and document the parameters identified by HEI as important for the activity analysis; creation of analytical possibilities: formation of reports for new tasks; tracking dynamics of processes in time, by structural subdivisions, types of activity, educational programs; providing automatic exchange of non-confidential information streams
	Ensuring the access of institutes and departments to those segments of the information field that they need for the implementation of delegated powers
	Introduction for the persons, who are elected (re-elected) to the positions of heads of departments, the requirements for submission to the Academic Council of the University of the program development department
	Improvement of the organization of business trips (within Ukraine and abroad)
Ensuring long-term development	Introduction of systematic sociological surveys of students, pedagogical workers, and others in the educational process at HEI. For the purpose of proper organizational and material support of sociological surveys, generalization of results, to create on the basis of the Department of Sociology a teaching and research laboratory to provide the authority to conduct surveys and synthesize the results.

Source: proposed by the authors on the materials [1-8]

In the investigated strategic documents [1-8], the measures implementing the specified strategic task are: 1) the creation of an electronic library; 2) active implementation of information resources in the educational process; 3) improvement of the document circulation system; 4) providing automation of management of educational and educational process; 5) the creation of electronic textbooks and lecture notes; 6) creation of the necessary conditions for the use of information technologies by students and professors; 7) providing an adequate system of motivation of employees to acquire skills in the field of information technology. Important direction of the strategic development of information provision of the educational process of domestic HEI is the formation of its positive image. This will be facilitated by the constant presence in the information space, the dissemination of reliable information on HEI and its active promotion. The recommended strategic goals, tasks and measures for the development of information provision of the educational process in the HEI are given in the table 9. Development of informational support of scientific activity of domestic HEI, taking into account the proposals set forth in the document [1] provides: 1) "the acquisition and development of computer and telecommunication equipment, software for scientific research"; 2) "providing scholars with broad access to world information science and educational resources"; 3) "creation of a regional center for the certification of electronic keys".

Table 9

The recommended structure of the strategic development of information provision of the educational process of the HEI of Ukraine

Goals / Tasks	Activities
Formation of a single integrated, reliable and effective information environment for providing high-quality educational services at the university.	Creation of an electronic information system "Electronic Library"
	Implementation of the educational information resources in the educational process
	Providing students and university employees with the conditions for the free possession of modern information and communication technologies
	Improvement of document circulation systems, automation of the management of the learning process
	Development of the principles of forming the Bank of web-resources of universities, implementation of methodological and technological support for the creation of electronic textbooks, manuals, lecture notes and their introduction into the educational process.
	Motivation to increase and provide the necessary level of competence of personnel in the field of information technology
Formation of a positive image of the university	Provision of information on the Internet portals of universities, which will enhance their image
	Protecting the protection against unfair and inaccurate information about them
	Formation of a constant flow of information about universities in order to continuous their presence in the information space

Source: proposed by the authors on the materials [1-8]

Implementation of information provision in domestic HEI, taking into account the proposals set forth in documents [1-8], provides for the following measures: 1) the formation of the main areas of information technology development; 2) "development and implementation of the Concept for the creation of a unified integrated media environment of the University"; 3) "comprehensive elaboration and economic substantiation of the implementation of all stages of the informatization of the University's activities"; 4) "the formation of an organizational structure ensuring the functioning of the university's information environment"; 5) "standardization and documentation of all stages of the informatization process"; 6) "the selection of basic information provision services for the activities of the University and determination of the sources of funding for the implementation of these services."

Particular attention is paid to the measures to ensure the improvement and improvement of information support for the implementation of applied and fundamental research, as well as automation of the management of research activities. The recommended strategic goals, tasks and measures for the development of information support for scientific activities of the ZOO of Ukraine are grouped in Table 10. An important strategic direction of the activities of domestic HEI in the social sphere is the improvement of youth policy and student self-governance, which is associated with the implementation of the follow-up measures proposed in the document [2, p. 15]: 1) "Implementation of youth policy at the university and its normative-legal support; 2) student self-government development; 3) ensuring participation of student youth in the management of the university and in public life; 4) social protection of students ".

Table 10

Structure of strategic development of information support of scientific activity of HEI of Ukraine

Goals / Tasks	Activities
Formation of a single integrated, reliable and effective information environment for the development of research at HEI	Improvement of the level and improvement of information provision for fundamental and applied research, strengthening of the research component in the programs of training of specialists of higher qualification
	Improvement of document circulation systems, automation of scientific research management
	Formation and maintenance of the register of scientific and methodological support of the educational process in electronic format
Formation and implementation of the university information support strategy	Determination of strategic directions of university development in the field of information technologies
	Development and adoption of the Concept for the creation of a united integrated media environment of universities as a software normative document of the HEI
	Comprehensive elaboration and economic substantiation of the implementation of all stages of informatization of the activities of universities: from conception to implementation of software and technical solutions
	Formation of the organizational structure of ensuring the functioning of the information environment of universities
	Standardization and documentation of all stages of informatization
	The selection of basic information provision services in the areas of university activities (administration and administration, educational process, scientific and research activities, library affairs, additional services) and determination of sources of funding for the implementation of these services.

Source: proposed by the authors on the materials [1-8]

Among the strategic directions of the development of HEI in the social sphere is the implementation of relevant social programs and the achievement of certain social goals, namely: 1) "development and improvement of the system of material and moral stimulation of university employees, as well as students, postgraduates and doctoral students; 2) implementation of appropriate occupational safety measures; 3) provision of financial support for the relevant categories of persons; 4) preservation and popularization of cultural traditions; 5) providing and providing all necessary assistance and assistance to persons with disabilities and their support; 6) the formation of social values and spiritual guidance, etc. "[1-8]. The recommended strategic goals, tasks and measures for the development of the social mission of the HEI of Ukraine are given in the table 11.

Table 11

Recommended Strategic Objectives, Tasks and Activities in the Context of the Development of the Social Mission HEI Mission of Ukraine

Goals / Tasks	Activities
Become and be the center of culture and educational activity in the region, promote changes in the social environment through the creation of an atmosphere of spirituality and the formation of a high level of moral culture, civic consciousness in the youth, to teach the principles of constructive solution of problems in implementation of life models	Preservation, multiplication and propaganda of national cultural traditions through the creation of a system of cultural and educational centers and units at the university.
	Implement social programs aimed at achieving social goals: ensuring timely payment of wages, improving the system of moral and material incentives for workers and students, supporting people who are in extreme need, labor protection
	Strengthening social support for students of privileged categories
	Provision of persons with special needs without barrier access to university facilities
	Definition and formation of social values and spiritual references
	Growth of social activity of student youth
	Improvement of housing and social and living conditions of students

Source: proposed by the authors on the materials [1-8]

Conclusion.

The main components of the innovative structure of the development strategy of the HEI of Ukraine have been developed. The following strategic areas are proposed to include: research work; international positioning of the university; the quality of scientific and pedagogical workers; material and technical support of the educational process; material and technical support of scientific activity; educational activity; student contingent; management system at the university; informational support of the educational process; informational support of scientific activity; the social mission of the university. Within the identified areas, recommendations are made for strategic goals, objectives and specific measures to be implemented in the context of the implementation of the strategy for the development of the HEI of Ukraine.

The scientific novelty of the obtained results is: 1) development of a list of priority directions of strategic development of the HEI of Ukraine, characterized by full coverage, complexity of the approach to the choice of key functional areas, unified application, which manifests itself in the possibility of using them in the practical activities of each HEI; 2) the formulation of specific recommendations for strategic goals, objectives, and concrete measures necessary for their achievement of goals. The proposed list of strategic instruments is universal and can be implemented in any HEI. The theoretical and practical significance is the development of theoretical and methodological and applied principles of the formation and development of strategic planning of the HEI activity. The socio-economic effect is to obtain economic results from the formation of effective strategies for the development of HEI.

Further scientific developments will consist in the development of road maps in the context of the implementation of strategic goals for the development of HEI.

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FINANCIAL DIAGNOSTICS AS AN INSTRUMENT FOR PROMOTING SUSTAINABLE DEVELOPMENT OF THE ENTERPRISE IN A CRISIS CONDITIONS

Abstract. *The growth of competition in the consumer market, changing consumer preferences and needs as a result of the reduction of solvent demand, the permanent recession of economic processes determine the volatility of market conditions. In order to ensure the efficiency of functioning of domestic enterprises and their sustainable development in conditions of uncertainty, it is extremely important to set up a qualitatively new system of information support for crisis management, which, in turn, requires the development of a conceptual approach to financial diagnostics as a component of the system. Conceptualization of financial diagnostics allowed concretizing its conceptual and terminological apparatus - essence, purpose, tasks, principles, methodical tools - as a leading tool of the crisis management system of the enterprise. On the basis of unification of the sequence of implementation of diagnostic procedures within the system of sustainable development of the enterprise with the use of simulation a reference model of the process of financial diagnostics in the system of ensuring sustainable development of the enterprise was developed that provides the integration and operational interaction of elements of the crisis management system with the enterprise management system in general. The purpose of the suggested adapted mechanism functional model for ensuring sustainable development in the system of crisis management of the enterprise is to provide financial stability, optimize the movement of financial resources, strengthen resource potential, which, in turn, is the basis for the development and effective implementation of a sustainable development strategy, taking into account the requirements of crisis management and financial security with sufficient financial independence of the enterprise.*

Introduction.

Numerous internal and external challenges (long-term military aggression, low level of trust in the system of public administration, high corruption, weak financial discipline, poor investment attractiveness, low competitiveness, excessive debt burden, freezing of social standards, budget burden, etc.) severely restrict the potential of Ukraine in the global business space and, through the transmission of global financial and economic crises, increase the negative consequences of systemic contradictions in the national this economy. As a result, an increase in the frequency of occurrence of crisis situations and the magnitude of their destabilizing effects in enterprises of the vast majority of the national economy.

To ensure the effectiveness of using the financial and resource potential of domestic enterprises, increase the effectiveness of their functioning and further sustainable development in the conditions of uncertainty and constant changes in market conditions, the stimulus to which is mainly the growth of competition in the consumer market and the change in consumer preferences and needs as a result of reducing the solvency demand, it is extremely important to create a qualitatively new system of information support of crisis management, capable of providing communications and to satisfy information requests of users at all stages of the management process. The formation of such a system, in turn, requires the development of a conceptual approach to financial diagnostics as a component of the crisis management system, which allows for a detailed "survey" and identifies the state and trends in changing the financial and economic potential of the enterprise under conditions of uncertainty, timely detection of crisis phenomena and ensuring the effectiveness of the implementation of management procedures aimed at preventing and overcoming the consequences of their devastating effects, the restoration of financial parameters of the productive fun Ensuring the sustainable development of the enterprise in a dynamic business environment.

1. Financial diagnostics conceptualization of in the system of crisis management of the enterprise

The system of crisis management is an integral part of the management system of a modern enterprise and represents a set of interrelated elements that provide purposeful implementation of management procedures aimed at timely detection of crisis phenomena, prevention and overcoming of the consequences of their destructive influence, restoration of financial parameters of effective functioning and ensuring sustainable economic development enterprises in the dynamic business environment [1, p.17]. In a recession of economic processes, the leading place in the system of crisis management of the enterprise is financial diagnostics.

The study of modern terminology has shown that financial diagnostics is interpreted by scientists as:

- a process of research, evaluation, identification of the causes of change and forecasting of the state and results of financial and economic activity of the enterprise in order to minimize the negative impact of external and internal factors and elaborate a development strategy [1, p.178; 2, p. 94; 3, p. 120; 4, p. 61];

- a system of target analysis, which provides support for decision-making on financial rehabilitation of the enterprise through a comprehensive analysis of the financial and economic state and factors of its change, trends and prospects of enterprise development [5, p. 94; 6, p.102; 7, p.30];

- a possibility of identifying the state of the enterprise on the basis of a set of research procedures aimed at assessing the state of the enterprise, the dominant factors of its deterioration and opportunities for the implementation of development goals [8, p.113; 9, p.286;

- a part of the system of knowledge of financial analysis and the effectiveness of the financial mechanism of the enterprise, which allows you to assess the financial situation of the enterprise, the reasons and prospects for its change [10, p. 94; 11, p. 94].

The variety of available approaches to the interpretation of the definition of "financial diagnostics" proves that in the context of organization, technology, functions and tools of management activities for the implementation of a set of research procedures aimed at assessing the financial condition of the enterprise and its results, identifying the reserves for their improvement and substantiating the necessary management decisions, each of them has the right to exist. At the same time, it is expedient to unify and specify them in the context of crisis management and sustainable development of the enterprise. In view of this, under the financial diagnostics, we propose to understand the system of special knowledge implemented through the use of modern methodological tools during the consistent implementation of certain diagnostic procedures for the identification and forecasting of the state and results of financial and economic activity of the enterprise, the reasons for their change, timely detection of the symptoms of the crisis and the justification of the anti crisis measures complex to ensure sustainable development of the enterprise in a crisis. This definition meets the modern requirements of the organization of integrated management systems, because it treats financial diagnostics as a system of special knowledge, integrated with the system of crisis management in the general system of enterprise management at the level of the process of diagnosing crisis phenomena and the results of its financial and economic activities, and provides communication and the formation of information an array of relevant data to make decisions for new competitive advantages and sustainable development in a crisis. The above-mentioned actualizes the specification of the subject area of financial diagnostics, its goals, tasks, principles and methods for the implementation of diagnostic procedures, functions and features in the system of crisis management of the enterprise.

The subject of financial diagnosis should be considered causal relationships that determine the change in the state and results of financial and economic activity of the enterprise in a crisis.

The main objective of financial diagnostics in the system of crisis management of the enterprise is to provide information support for decision making on prevention and exit of the enterprise from the crisis, to restore and improve the parameters of the financial state and results of the economic activity of the enterprise, obtaining new competitive advantages and perspectives of sustainable development in an unstable business environment.

Achieving a certain goal of financial diagnosis is possible on the basis of a number of tasks, the main of which are:

- assessing the state and results of financial and economic activity of the enterprise;

- monitoring and revealing development trends of the results of economic activity and financial condition of the enterprise;

- identifying and quantative assessment of the violation reasons of financial equilibrium and negative changes of the results of financial and economic activity;

- forecasting the possibilities of complications emergence and crisis parameters of the enterprise development;

- assessing the ability to neutralize the threat of bankruptcy and the search for potential reserves to ensure sustainable economic growth and financial security of the enterprise;

- substantiating the variants of managerial decisions and development of measures on practical implementation of attraction of detected reserves;

- evaluating the efficiency of the enterprise management in the context of reasonable measures for ensuring sustainable economic growth and financial security in the conditions of uncertainty.

The methodological basis of financial diagnostics are the principles of the target nature, the organization of research and the systematic knowledge of the whole due to its part, the reasons due to its action and the internal due to the external (Fig. 1).

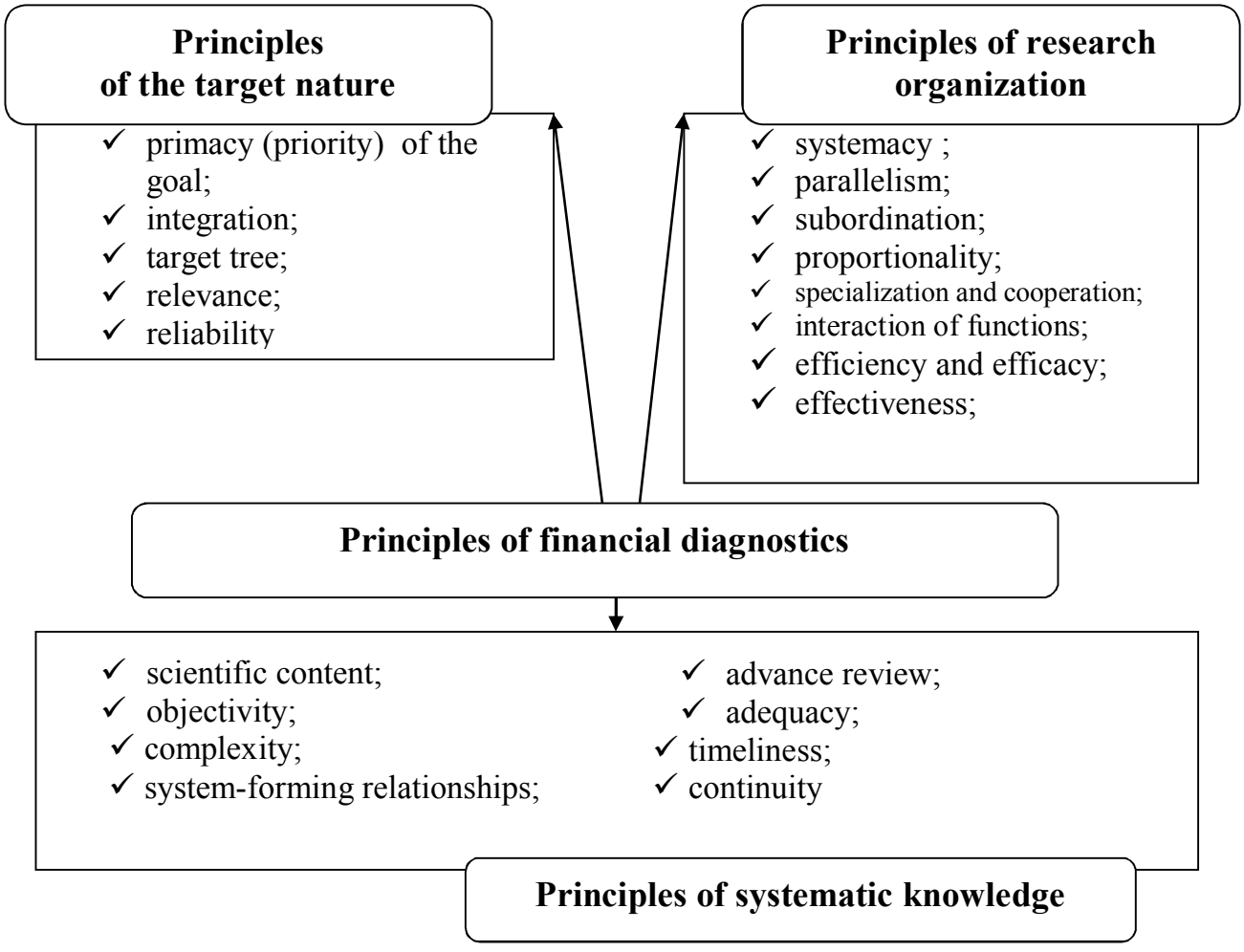

Fig. 1. Principles of financial diagnostics

Compliance with these principles not only enables the achievement of the goal and the solution of the main tasks of financial diagnostics, but also ensures the implementation of its main functions in the system of crisis management of the enterprise, namely:

- an assessment that relates to the identification of the state and results of financial and economic activity of the enterprise, the reasons for their negative changes and the quantitative assessment of the force of their influence;

- a control that relates to the verification of the reliability of information used in the process of financial diagnostics and the ongoing monitoring of the effectiveness of implemented management decisions to prevent and mitigate the consequences of the devastating effects of crisis phenomena and ensure sustainable development of the enterprise in order to ensure the reliability and efficiency of all essential aspects;

- a search engine that relates to the definition of opportunities (reserves) for ensuring sustainable development of the enterprise in a crisis and justifying management decisions with an orientation towards achieving strategic parameters of the state and results of financial and economic activity of the enterprise;

- prognostic, which is connected with forecasting opportunities of crisis development of the enterprise and its ability to neutralize the threat of bankruptcy;

- stabilizing, which is connected with ensuring detection, prevention and overcoming of crisis phenomena, restoration of viability and achievement of desirable parameters of the state and results of financial and economic activity of the enterprise, which is very important for its stable functioning in the conditions of crisis and prospects for further development;

- information, which is connected with ensuring the information support for decision-making on the restoration and improvement of the state and results of the economic activity of the enterprise, the prospects for its sustainable development in the conditions of uncertainty.

It should be noted that in view of the targeted direction of research for the needs of crisis management and the available information on the problems existing in certain areas of financial and economic activity, it is expedient to carry out express diagnostics and fundamental (in-depth or general) diagnostics of the state and results of financial and economic activity of the enterprise with using the appropriate methodological toolkit (Figure 2).

Currently, in the theory and practice of diagnostic research, both qualitative and quantitative methods and models for assessing the efficiency of an enterprise's operation, based on the use of indicators-indicator systems, differ significantly in their composition. It must be admitted that qualitative methods are rather important, but they contain elements of subjectivity and should be used in addition to quantitative ones.

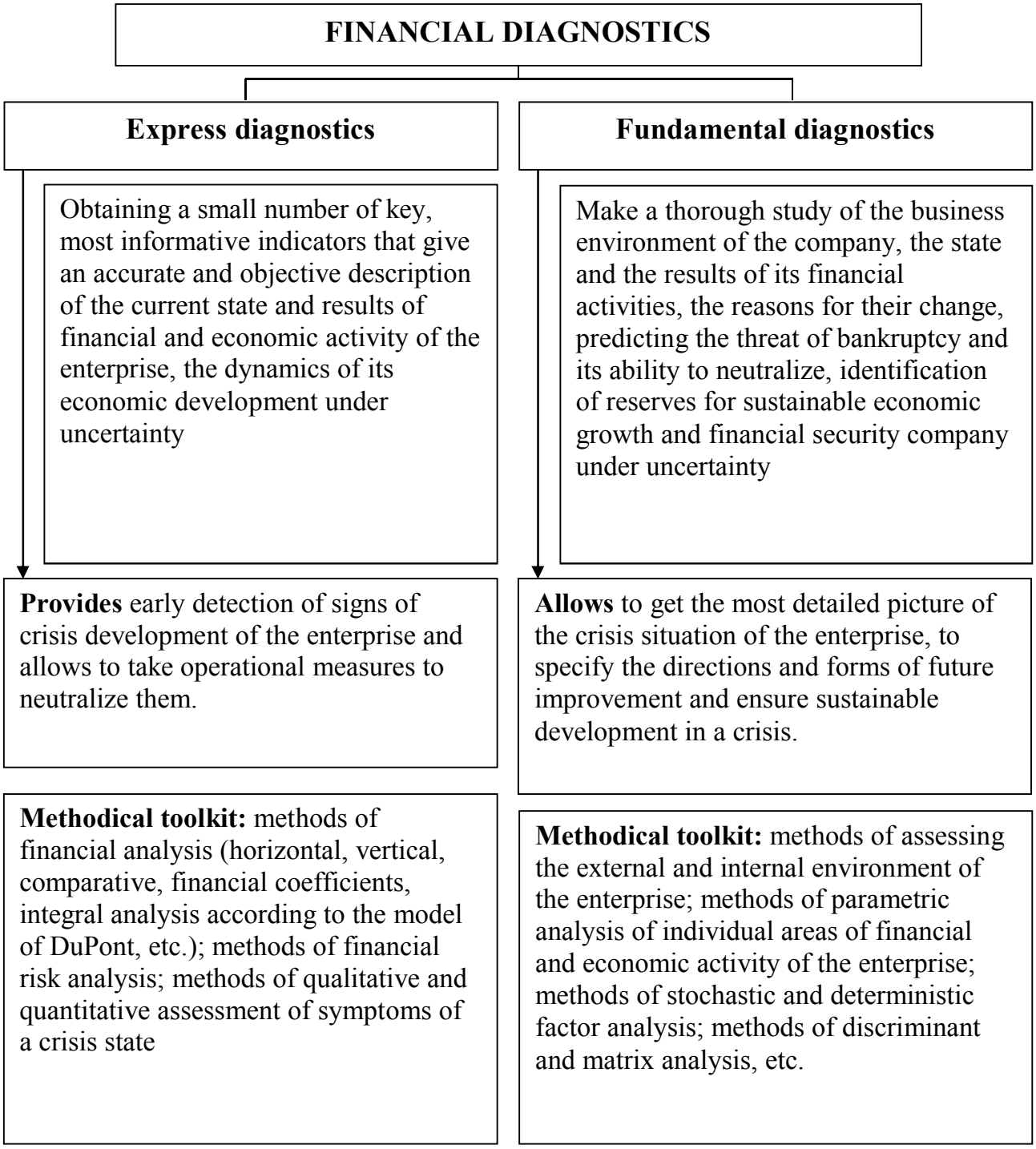

Fig. 2. Essence and methodical tools of financial diagnostics in the system of the enterprise crisis management

This will ensure the implementation of an integrated approach to the diagnosis of the state and results of financial and economic activity of the enterprise, based on the evaluation of financial parameters of its activities and qualitative characteristics of its effectiveness, thus neutralizing and limiting the existing formalized and unformulated diagnostic models.

The characteristic features of financial diagnostics in the system of crisis management are:

- realization in the conditions of uncertainty and turbulence of the modern business environment;
- the ability to determine timely and identify the symptoms of a crisis, to prevent and overcome the consequences of their devastating effects, to restore the financial parameters of effective functioning and to ensure sustainable economic development of the enterprise under conditions of uncertainty;
- increased requirements for the efficiency, objectivity, adequacy and reliability of information to substantiate management decisions, as well as their efficiency and effectiveness;
- the focus on management modernization and prevention of crisis development of the enterprise.

The above proves that financial diagnostics occupy a leading position in the system of crisis management of the enterprise, and determines the expediency of directing further research in the direction of modeling the process of financial diagnostics.

2. Modeling the process of financial diagnostics of crisis phenomena and substantiating the parameters of sustainable development of the enterprise

Financial diagnostics is a multifaceted system of support for making managerial decisions based on an anti-sipative management concept that "... is designed to provide comprehensive identification, analysis, elimination and forecasting of enterprise problems in order to ensure the adoption of forward-looking managerial decisions aimed at achieving its strategic and tactical objectives. One of the most important components of effective management is to ensure the stable development of the enterprise ... This determines the need for diagnostics ... as a result of the interaction of all elements of the system of financial relations of the enterprise, an indicator of ensuring the enterprise with necessary financial resources to implement effective economic activity "[8, p. 8].

Taking into account the versatility of financial diagnostics as a support system for making managerial decisions, it is expedient to unify the sequence of implementation of diagnostic procedures within the system of sustainable enterprise development using modeling. Modeling is one of the main means of the theory of cognition, which is the basis of any method of scientific research, and in the context of our study involves the development of a reference model of the financial diagnostics process as a component of the crisis management system of the enterprise and a mechanism for ensuring its sustainable development in a crisis. Summarizing the scientific views of modern scholars and the results of my own research in this field, allows to recognize that the technology of financial diagnostics as a process of formation and transmission of information for the management of sustainable development in the conditions of a crisis involves three stages (Fig. 3), which in its development (from the beginning and to the end) pass certain stages, and whose implementation is closely linked to solving functional tasks of the financial system diagnostics in crisis management.

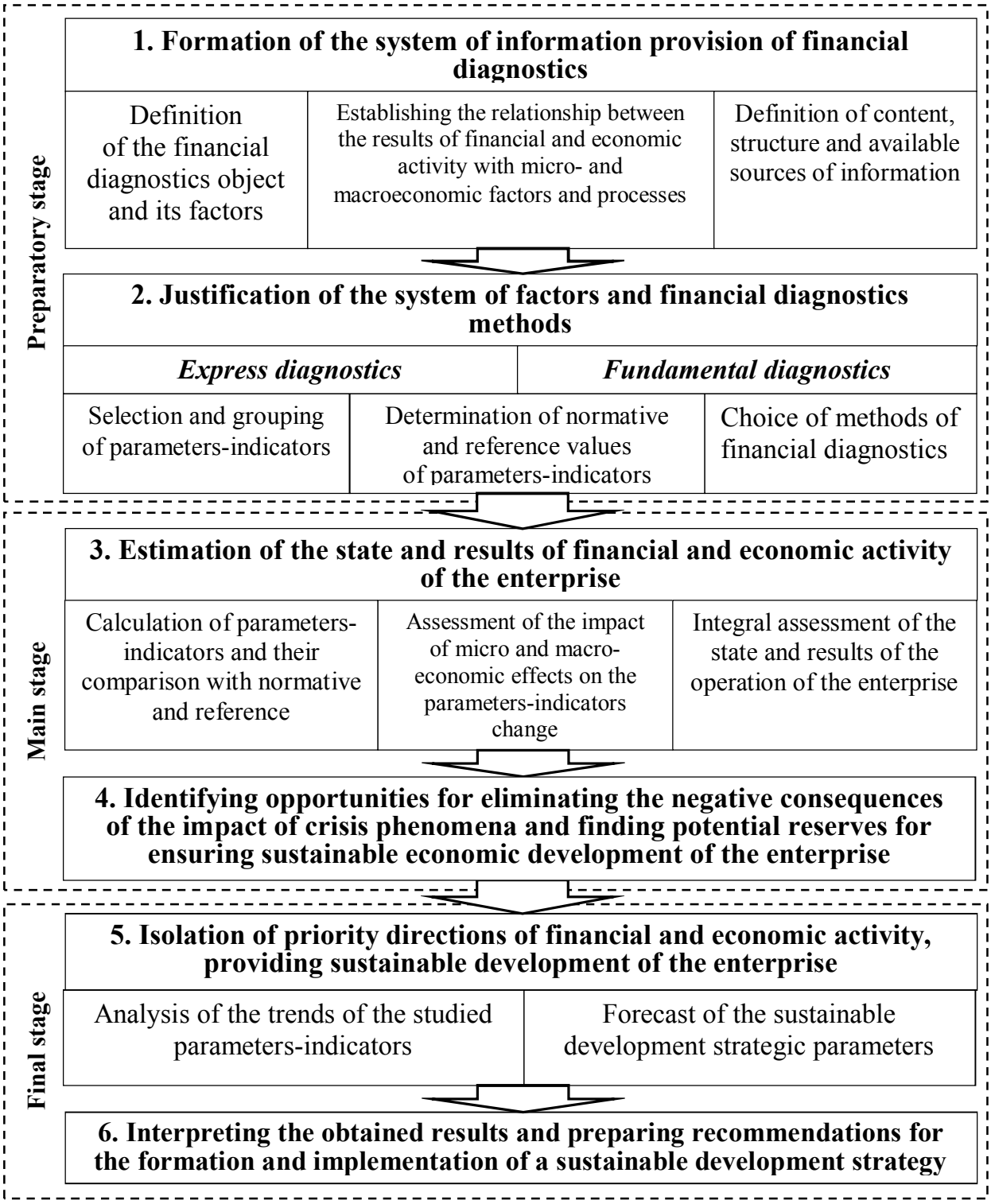

Fig. 3. Reference model of the financial diagnostics process in the system of sustainable development of the enterprise

The first stage of financial diagnostics of an enterprise is the formation of a system of information support that is logical, since the adoption of weighted decisions is impossible without qualitative and reliable information. At this stage, the research should be complex, starting with the definition of the object of financial diagnostics and the formation of a system of factors-indicators, a comprehensive study of the determining parameters and their

dependence on changes from the factors of the external and internal environment of the enterprise. The purpose of this stage is to determine the content, structure and available sources of information about the results of financial and economic activity of the enterprise, interconnected economic phenomena and processes.

At the second stage, it is necessary to form a system of indicators, on the basis of which will be conducted financial diagnostics. Express-analysis involves the use of methods based on a qualitative assessment of the probability of a crisis state of the enterprise, such as the method of Argenta (A-account); Skoun method; ERNST & WHINNEY methodology; method of qualitative analysis by V.V. Kovalov. These methods are characterized by a certain subjectivism, since they are of great importance to the experience and knowledge of the analyst. The choice of the method of evaluation depends on the specifics and conditions of the enterprise, its size. So, in our opinion, it is expedient to use Skoun's method for revealing crisis symptoms at small enterprises, when answers to test questions are provided directly by the head of the enterprise, which will ensure the efficiency of the assessment. It is expedient to detect signs of a crisis situation in medium and large format enterprises using A-account methods, ERNST & WHINNEY methods, V.V. Kovalov's qualitative analysis, which provides an expert assessment of the crisis symptoms. In addition, it should be noted that the list of early signs of a crisis state is not exhaustive and can be extended taking into account the conditions of operation of the enterprise by the results of modern scientific development. Identifying any symptoms of a crisis situation, an enterprise needs to carry out further fundamental financial diagnostics by means of formalized methods of financial analysis in order to identify problem areas of activity.

In the process of selection of indicators, it is necessary to determine the scope of influence on their change of internal and external factors, to predict interconnections and intercoherence of the individual parameters changes and an integrated assessment of the financial state, as well as to establish a system of normative and reference criterion factors and to verify the compliance of selected indicators with the available statistical and informational support [13].

At the third stage, after grouping, the selection of factors-indicators and the formation of a statistical and informational base, they are calculated for a definite study period and intervals. Financial diagnostics involves calculating financial ratios and comparing their actual values with normative and reference ones. This method is the most affordable because it is based on the information contained in the financial statements of the enterprise. A multivariate analysis of statistical data using deterministic and stochastic factor analysis methods is conducted in the course of which a quantitative assessment of the influence of factors of the internal and external environment on the change of individual components and its integral characteristics is given, as well as potential possibilities of improving the level of resources use, solvency, financial sustainability and efficiency management.

On the basis of the obtained data an estimation of the current state of financial and economic activity of the enterprise and its components is made, the preliminary conclusion about its dependence on changing conditions and factors of the functioning of enterprises in a market environment on the basis of an integrated assessment of the results of financial and economic activity is made. An integral assessment is, in many cases, the only possible one, since large amounts of information are obtained as a result of various types of analysis, which complicate the procedures for making a final decision.

Detection of the possibilities of eliminating the negative consequences of the impact of crisis phenomena and the search for potential reserves for ensuring the sustainable economic development of the enterprise is carried out depending on the enterprise's anti-crisis strategy chosen by the enterprise on the nature of crisis management (offensive, defensive, compromise and consensus, liquidation) and the nature of the manifestation of crisis phenomena (preventive) or reactive). After all, in our opinion, the very selected on these grounds, anti-crisis strategies provide a balance of internal parameters of the system in accordance with a certain type of environment, and in the future - sustainable development of the enterprise.

At the fifth stage there is an allocation of priority areas of financial and economic activity to ensure sustainable development of the enterprise. By means of studying methods the series of dynamics, index method, analytical alignment and forecasting methods, trends of development of the studied indicators are revealed and the forecast of strategic parameters of sustainable development of the enterprise is made.

The final stage of the enterprise's financial diagnostics is the preparation of conclusions and recommendations for the formation and implementation of a strategy for sustainable development, their visualization, specification and presentation.

3. Formation of a mechanism for ensuring sustainable development in the system of crisis management of the enterprise

Research of scientific approaches to the interpretation of sustainable development of the enterprise allowed us to consider this process through the prism of achievement of strategic goals, effective use of resource potential and long-term preservation of worthy competitive positions in conditions of instability of the business environment. The ability of an enterprise to ensure sustainable development in crisis conditions is determined by the level of immunity of its management system to internal and external threats and risks, which allows adapting quickly to changes in the operating environment, characterizing the degree of financial security and sustainability. Consequently, sustainable development of the enterprise is impossible without the availability of reliable mechanisms of crisis management.

Anti crisis management in the current conditions of a dynamic market should include a set of measures to identify factors that affect the violation of the anti-crisis stability of the enterprise, their prevention, timely diagnostics, prevention and neutralization, and aimed at achieving targeted strategic targets and progressive development. The main objective of the anti crisis management is to ensure the sustainable development of the enterprise, a "firm" position in the market and a stable financial state in all economic, political, social situations in the country [14]. It should be noted that in the current practice of anti crisis management, priority is given to mechanisms of direct response, which eliminate some negative manifestations of crises, mitigate their consequences, but do not establish conditions for development. The nature of the manifestation of crisis processes in today's conditions requires the use of new mechanisms of crisis management, which can not only identify and mitigate the negative effects of crises, but also use their ability to radically change the existing system of anti crisis management [15].

The process of ensuring sustainable development in the system of crisis management of the enterprise is also based on the implementation of a certain functional mechanism. In previous studies, we have proposed, under the mechanism of ensuring sustainable development and financial security of the enterprise, to understand the totality of clearly defined actions to set up reliable conditions for guaranteeing its protection against the negative impact of internal and external threats, while maintaining the positive dynamics of effective indicators and stable competitive positions in the market [16]. These actions may include a set of organizational, financial and legal means of influence on the part of financial management entities aimed at timely detection, prevention, neutralization and elimination of threats to financial security and sustainable sustainable development of this entity. That is, the mechanism of management of the provision of sustainable development and financial security of the enterprise implies the impact of subjects of sustainable development on the object - the financial activity of the enterprise, which affects primarily on the state of its financial resources, taking into account the effects of financial risks and financial threats [17].

The study of theoretical foundations and practical aspects of ensuring sustainable development of the enterprise allowed developing a model for the formation of the financial and economic mechanism for managing the provision of sustainable development and financial security taking into account the concept of strategic enterprise management [16]. The combination of the conceptual foundations of crisis management and financial diagnostics as a tool for ensuring sustainable development allowed adapting the model of the financial and economic mechanism proposed earlier to the functional model of the mechanism for ensuring sustainable development in the system of crisis management of the enterprise (Fig. 4).

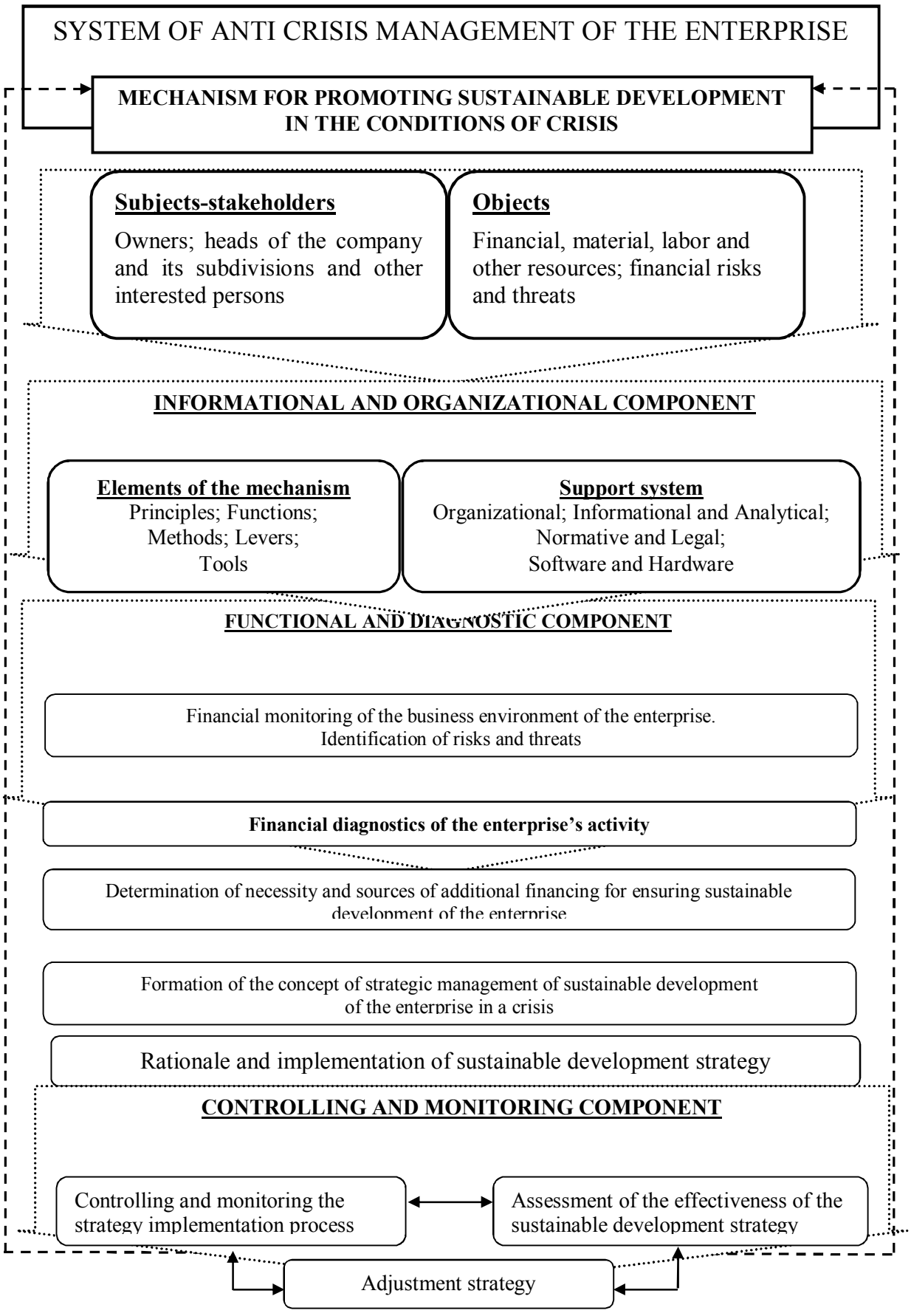

Fig. 4. Functional model of the mechanism for ensuring sustainable development in the of crisis management system of the enterprise

The functional model of the mechanism for ensuring sustainable development consists of three components:

– informational and organizational (defines the principles, functions, methods, levers and tools of the mechanism for ensuring sustainable development and the system of its organizational, regulatory, informational and analytical and software and technical support);

– functional and diagnostic (involves financial monitoring of the business environment of the enterprise for carrying out its financial diagnostics. Based on the obtained data, the optimization of the financial resources movement is carried out in order to substantiate and implement the strategy of sustainable development in the conditions of the crisis);

– controlling and monitoring (aimed at the operational receipt of information, processing and analysis of trends in the development of planned factors-indicators of the strategy, and, if necessary, adjusting the strategic parameters of the sustainable development).

The adapted functional model of the mechanism for ensuring sustainable development in the system of crisis management of the enterprise is an integral part of its overall management. The main advantages of applying the proposed model are:

– ensuring a stable financial condition of the enterprise in all parameters both in the current period and in the long-term perspective;

– optimizing the financial resources of the enterprise in terms of mobilization and use;

– strengthening the enterprise's potential while establishing a protection system against external and internal threats;

– substantiating and implementating the strategy of sustainable development taking into account the requirements of crisis management and financial security with sufficient financial independence of the enterprise;

– protecting financial interests of stakeholders of the enterprise;

– ensuring the competitive functioning and sustainable development of the enterprise in the changing business environment.

Conclusions.

The paper presents a scientific generalization and suggests a new approach to solving problems related to the development of theoretical, deepening methodological and improving organizational principles of financial diagnostics and the forming a mechanism for ensuring sustainable development in the system of crisis management of the enterprise. Proposals of the scientific research are summarized by the following conclusions:

1. The conceptualization of financial diagnostics allows us to interpret it as a component of the enterprise's crisis management system, which integrates into a mechanism for ensuring sustainable development at the level of the financial diagnostics process, which ensures the formation of information for the adoption of substantial management decisions under uncertainty. The generalization of the theoretical positions contributed to the clarification of the conceptual-terminological apparatus of financial diagnostics, its goals and objectives; systematization of the principles, observance of which contributes to the achievement of the goal, solving the main tasks of financial diagnostics and ensures the realization of its main functions in the system of crisis management of the enterprise; detailed methodological tools in the context of express and fundamental financial diagnostics.

2. Taking into account the versatility of financial diagnostics as a support system for making managerial decisions, it is expedient to unify the sequence of implementation of diagnostic procedures within the framework of the system for ensuring sustainable development of the enterprise with the use of modeling. The suggested reference model of the financial diagnostics process in the system of sustainable development of the enterprise reflects the unity of all elements of the crisis management system, which ensures the effectiveness of its establishing and functioning. In addition, it has theoretical and practical value for ensuring the integration and operational interaction of elements of this system with the enterprise management system as a whole.

3. The combination of the conceptual foundations of crisis management and financial diagnostics as an instrument for ensuring sustainable development has enabled us to propose a functional model of the mechanism for ensuring sustainable development in an enterprise's crisis management system. The main advantages of using the model of enterprises in the changing business environment are ensuring financial stability, optimizing the flow of financial resources, strengthening resource potential, which in turn is the basis for the development and effective implementation of a sustainable development strategy taking into account the requirements of crisis management and financial security with sufficient financial independence of the enterprise.

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FORMATION OF PROFESSIONAL COMPETENCES FROM THE EDUCATIONAL-PROFESSIONAL PROGRAM "ECONOMIC CYBERNETICS" BY MEANS OF BUSINESS GAME

Abstract. *The professional competence of specialty graduate is considered "Economics" of educational-professional program the "Economic Cybernetics". The business game "Competition of projects of automation of business processes in the economy" is presented. as a method of forming professional competencies Specialist in Economic Cybernetics. The content, structure and rules of the business game, which is the current effective method of interactive learning and helps students gain experience solvability real ting s economically s problems. The functions of participants in a business game team competed with the graduates of the educational-professional program "Economic Cybernetics". Considered the great experience of the Department of Economic Cybernetics of the Zaporizhzhya National University, which use interactive methods of training in cooperation with business representatives.*

Introduction.

Today, the development of educational technologies and society as a whole is characterized by a high degree of informatization. Therefore, along with the importance of theoretical training of students, there is a need to develop analytical abilities, skills for joint actions in new unpredictable situations, to critically analyze existing information and make decisions based on its analysis.

To solve practical economic problems of modern life, it is necessary to involve specialists in economic cybernetics. In order to adapt to the constant changes and conditions of uncertainty inherent in the modern development of economic relations, future specialists need to have theoretical knowledge and practical skills, in particular, the ability to study independently, to solve problems of problem character and analytical assessment of situations.

To solve this problem during the educational process, various types of industrial practices are used, laboratory works are performed on the basis of statistical data of real enterprises and organizations. But these types of work in most cases are performed by students individually, which is not always effective.

In order to increase the effectiveness of the educational process results, such forms of collective work as the final conference on the results of the practice with the presentation of the materials and their discussion are used. But this kind of work encompasses, as a rule, students of one course, and their activity is limited only to the presentation of their own and the perception of someone else's experience.

For the additional educational educational effect and expansion of the students' circle, the business faculty at the Zaporizhzhya National University holds a business game in the form of a competition of projects for automation of business processes of economic entities.

The purpose of the business game is finding solutions to complex problems through the application of special rules of discussion, stimulation of creative activity of participants through special methods of work (for example, the method of "brainstorming"), which provide fruitful results. Business game allows you to generate solutions to problems and outline ways to develop an organization, launch a mechanism for implementing strategic goals.

During the conduct of the business game the following goals are achieved:

– development of creative analytical thinking;

– development of the ability to organize the work of a team of specialists;

– development of the ability to formalize and analyze economic observations;

– developing the ability to draw up analytical work plans, collecting the necessary initial information;

– formation of skills of mastering mathematical tools - methods of analysis, optimization and forecasting.

The competition involves the participation of several teams of 5-9 people. Participants in the business game - students of the second-fourth year. The project manager is elected a fourth-year student who has experience in practical work, obtained during the course of two industrial practices. Students of educational qualification level "specialist" and "master" participate in the evaluation of the results. Thus, for the active work in the business game there is a large number of students, which, by means of business games, has the opportunity to increase their general and special competencies.

The purpose of the article is to study the formation of competences of a specialist in economic cybernetics with the help of such an innovative learning tool as a business game.

1. Presentation of the main research material.

Under the conditions of active informatization of the society, interest in graduates of the specialty "Economic Cybernetics" is shown by enterprisesand institutions of all regions of Ukraine. Economists-mathematicians who have high qualifications in the field of organizational management and economics have modern mathematical methods for analyzing and forecasting economic situations using the latest information technologies, as well as managing economic objects in market conditions, are able to organize work on computerization of these

They are experts in the field of economics and management of production and economic systems. Students studying in the field of "Economic Cybernetics" receive a system of knowledge on basic economic training, use of methods of economic-mathematical modeling, strategies of economic development of enterprises with the help of modern information technologies.

The subjects of the study of a specialist in economic cybernetics include general laws and trends in the development of economic systems, motivation and behavior of market actors, socio-economic processes, their modeling and regulation.

The objectives of the training of economic cybernetics are the training of specialists who have modern economic thinking, theoretical knowledge and practical skills in the collection, processing, storage of economic information, analysis and synthesis of systems necessary for solving the tasks of the field of activity.

They are implemented using such methods, techniques and technologies as common scientific methods of cognition, as well as mathematical, statistical and qualitative methods of economic analysis, economic and mathematical modeling, information and communication technologies, research methods and presentation of results.

As a result, a specialist in economic cybernetics has a fairly wide range of employment opportunities, including computing and information technology (including software development and testing, computer software development) and corporate governance (including management of economic assets and production).

According to the educational-professional program, a graduate of the specialty "Economic Cybernetics" has a certain set of integral, general and special competencies (Table 1) [1].

In order for the necessary professional competencies to be acquired by future specialists in economic cybernetics, it is necessary that the learning tools help to master the relevant knowledge and skills. It is important to note that the learning outcomes should be sufficiently versatile. As an example, a specialist in economic cybernetics must combine a large number of special skills, one can bring the skills needed for him according to an educational-professional program to make sound forecasts of the development of socio-economic systems; ability to use computer networks in the enterprise (institution); and develop application *databases* on the client / server platform in conditions of distribution of databases using computer networks; abilities to develop interactive WEB-pages for local computer networks and Internet, to prepare reference and advertising information with the help of software and hardware, using text, image and HTML editors; and self-management skills (self-management), to be critical and self-critical, to understand the determinants of influence on communication with representatives of other business cultures and professional groups of different levels (with experts from other fields of knowledge / activities) on the basis of valuing diversity, multiculturalism and respect for them.

Table 1

List of competencies of the graduate

Type of competence	Definition of competence
Integral competence	Ability to solve complex specialized tasks and practical problems in the field of socio-economic relations, which involves the application of modern theories and methods of system analysis, economic-mathematical modeling and information and communication technologies.
General competencies	1 Ability to think, analyze and synthesize abstract. 2 Ability to oral and written professional communication in native and foreign languages. 3 Ability to search, process and analyze information from different sources using information and communication technologies. 4 Ability to apply knowledge in practical situations and be responsive to tasks and responsibilities. 5 Ability to creative and critical thinking, to adaptation and action in new situations, before making well-founded decisions. 6 Ability to interpersonal constructive interaction; consciously and socially responsible act on the basis of ethical considerations. 7 Aspiration for health, well-being and safety. 8 The desire to save the environment.
Special competencies	1. Ability to use normative and legal acts regulating professional activity. 2. Understanding of the main features of leading scientific schools and areas of economic science. 3. Ability to describe economic and social processes and phenomena on the basis of theoretical and applied models, analyze and comprehensively interpret the results. 4. Ability to apply economic and mathematical methods and models for solving economic problems and computer technology of data processing for solving economic problems, carrying out analysis of information and preparing analytical reports. 5. The ability to predict socio-economic processes on the basis of standard theoretical and econometric models. 6. Skills to use modern sources of economic, social, managerial, accounting information for drawing up service records and analytical reports. 7. Ability to use analytical and methodical tools for substantiating economic decisions. 8. Ability to independently identify problems of an economic nature in analyzing specific situations, suggest ways to solve them. 9. Ability to in-depth analyze issues and phenomena in one or more professional fields within the specialty. 10.Ability to use economic and mathematical methods for the analysis of an economic object with the help of knowledge gained and appropriate special methods.

Given that the graduate specialty "Economic Cybernetics" - a potential qualified head of the company or institution, and he does not move along the linear functional hierarchy is particularly important this feature is a specialist in economic cybernetics, as the construction and optimization of business processes. Methods unambiguous definition of the boundaries of the business process is now there, there can be no clear description of business processes of any company, not to mention the unique optimization.

Formal descriptions of business processes begin with the subjective definition of the boundaries of business processes, and all the results of optimization depend, first of all, on the position occupied by the particular person who conducts the work, from its qualifications, practical experience, creative abilities, personal installations. It is clear that in the essence of the business processes of the company, their description, analysis and optimization - this is not an end in itself, it is primarily work to organize effective company performance, to improve the competitiveness of the company. But would - be -processes are the basis of process-oriented management - a complex but effective approach to company management. This is an ideal managerial tool that not only reduces unproductive costs but also improves product quality, an instrument that allows you to have complete information about current business processes and make timely and strategically sound decisions. Modeling business processes provides "transparency" of all business operations, allows you to see the real picture of how the company functions, by presenting business processes existing in the organization in the form of graphical, tabular and text documents; gives an opportunity to analyze the probable consequences of failures at one or another stage of the work, to find and fix the errors found in a timely manner; as well as creates preconditions for continuous improvement and improvement of enterprise management.

With the help of developed models of business processes, the head of the enterprise can solve a number of tasks, in particular:

– representation of the company's activities and technologies adopted therein in the form of hierarchical business process diagrams that provide a visual representation of the data on the operation of the enterprise;

– construction of a rational and effective organizational and managerial structure;

– streamlining of information flows (including document circulation) within the enterprise;

– development and construction of rational technologies of work of enterprise divisions;

– increased business manageability;

– analysis of requirements and designing of specifications of the corporate information system;

– regulation of service functions, development of regulations on departments and job descriptions.

In order to form the competence of a specialist in economic cybernetics and teach him to work with business processes, it is expedient to use such innovative means of training as a business game: a means for modeling various conditions of professional activity (including extreme ones) by searching for new ways to perform professional tasks. Business game imitates various aspects of human activity and social interaction.

The game is also a method of effective learning, since it eliminates the contradiction between the abstract nature of the subject and the real nature of the professional activity.

There are many names and variations of business games that can differ in the methodology and goals set: didactic and managerial games; role games; problem-oriented; organizational and activity games, etc.

The use of business games can detect and trace the peculiarities of participants' psychology. Therefore, business games are often used in the selection process. With the help of the game you can define: the level of business activity of a candidate for a particular position; the presence of tactical and (or) strategic thinking; adaptation speed in new conditions (including extreme ones); the ability to analyze their own capabilities and build a line of behavior; the ability to predict the development of processes; the ability to analyze the possibilities and motives of other people and influence their behavior; style of management, orientation when making decisions on the game "for yourself" or "in the interests of the team" and many others.

Business game is one of the most effective active learning methods. For the first time in the learning game method (business game) was used in 1932 in Leningrad M. M. Birshteinom. In 1991, more than 2000 business games were used in the world, of which only in the former USSR and the USA - more than 1200. Business games are distributed and implemented in England, Canada, Japan, France, Germany, Poland, Czech Republic, Slovakia, and others.

The researchers found that when presenting the material in game form, about 90% of the information is acquired. The activity of students is vivid, is long-lasting and "makes" them active. On today distinguish three areas of application of the game method:

1. Curriculum: The method is used in the curriculum for advanced training and development of knowledge and skills.

2. Research area: used to simulate future professional activities in order to study decision-making methods, assess the effectiveness of organizational structures, automate business processes, etc.

3. Operational-practical sphere: the method is used for the analysis of elements of specific systems, for the development of various elements of the education system.

Positive and negative points can be noted in the use of the business game.

Positive in application of business games are: high motivation, emotional saturation of the process of training, preparation for professional activity, formation of knowledge and skills. Students learn to apply their knowledge, post-heated discussion helps to consolidate knowledge. Negative: on the part of the teacher - high complexity of preparation for the class, considerable tension throughout the course of the game - you need to be careful and benevolent leader, be focused on continuous creative search; It is necessary to have actor's data or acting skills; on the part of students - unwillingness to work with the use of business games; difficulty replacing the teacher who played the game. A business game helps to achieve educational, educational and developmental goals of a collective nature, based on acquaintance with the real organization of work.

Thus, the following features of the business game are realized:

– cognitive: realized in the process of the game through the acquaintance of students with dialectical methods of studying the issue (problems), organization of the work of the team, with the functions of their future professional activities on a personal example;

– educational: in the process of business game, awareness of the membership of its participants in the team is formed; the degree of participation of each of them in the work is determined jointly; there is a relationship between participants in solving common problems; collectively discussing issues that shape criticality, restraint, respect for others' opinions, attentiveness to other players in the game;

– developing: in the process of the game develop logical thinking, the ability to find answers to questions, language, language etiquette, ability to communicate in the process of discussion.

The quality of knowledge in the game form largely depends on the authority of the teacher. A teacher who does not have a deep and stable contact with the members of a group can not conduct a business at a high level. If the instructor does not trust students with their knowledge, pedagogical skills, human qualities, the game will not achieve the intended result, or even may have the opposite result. Business games are based on the principles of collective work, practical utility, democracy, publicity, competitiveness, maximum employment of each and unlimited perspective of creative activity in the game. The game must include everything new and progressive, appearing in pedagogical theory and practice.

This method reveals the student's personal potential: each participant can diagnose their capabilities alone or in a joint activity with other participants. Business games allow you to get a more or less clear idea of how a person will behave in a team, which is very important for the leader. For example, game participants who pay great attention to small details, details of task solving, as a rule, are excellent technical workers and performers.

The scenario of conducting a business game more often has this form.

In the introductory word before the participants of the game put the task, the heads and organizers of the game are presented, its program is announced. Participants: the installation is provided to overcome the psychological inertia of thinking, to destroy the traditional scheme of views and representations, and, at least for some time, to break away from the traditional conditions, persistent stereotypes of thinking.

After the lecture there is a simple introductory role-playing game. Its purpose is to intensify the participants of the game, to awaken creative forces in them, to create an atmosphere of benevolence and trust, on the one hand, rivalry and creative discussion - on the other. Next, all participants are randomly assigned to several equal groups that will work for the stated problem. Each group nominates a candidate who prepares his program speech and speaks with her. As a result of the discussion, a vote is held. The role-playing game is at a rapid pace, developing the players' improvisational thinking.

After that, the level by number and representation of the group, formed in advance, are removed, each in its premises, for carrying out a brainstorming one of the problems.

In each of these groups there are methodists, whose task is the ability to organize the process. The search engine pocket for each new brain attack begins with the choice of the leader on the problem, which should organize the work of the group, prepare a report for the conference and protect the selected action program in the competition. At the same time the leader chooses the opponent, his task - to assess the program of the adjacent group. The methodologist helps the leader of the search group to organize a collective work, to make proposals. The methodologist should ensure that a new leader of the search team and a new opponent are selected for each of the problems, thus maximizing the activity of all the participants in the game. When choosing a leader it is very important to observe democracy: leaders should be nominated both by leaders and ordinary specialists.

Upon completion of an independent work, the search group protects its project at a general conference. Reports usually make the following demands:

1. Give a brief analysis of the problem.

2. To substantiate the made proposals.

3. To prove the practical significance of the proposals and the possibility of their implementation.

In a problem-oriented business game all levels, administrative positions for the period of the game "eliminated", no one should enjoy any advantage. It is allowed to express any ideas, but in the game is absolutely unacceptable critique of the individual.

On this basis, relations are gradually formed, which bring together different views, thoughts, experiences, and allow to produce something intact. Such technology allows deep penetration into the problem, to ensure mutual understanding between people and to achieve the unity of social action, able to change the situation, to create a fundamentally new solution to the actual problem. The participants of the game practice the method of functional-cost analysis (FBA) in developing the optimal version of the algorithm of system operation, software, application of network methods in planning and management, acquire skills in determining the technical level of the system and its software (software). They also learn systems and economics, conduct technical, technical and economic documentation in accordance with the requirements of the State Standards. In the course of the business game, the work of the automated control systems department (MAS) is imitated.

The beginning of the business game is preceded by the presentation of the project itself. The future jury should present the goals and objectives set for potential participants, outline the range of participants' interests, recommend qualitative and quantitative methods of work, and determine the criteria for evaluating the results. In addition, each team is given a case - a description of the functioning of a real company or institution with a list of problems that exist in the management in the field of business process automation or document circulation.

Each group is interested in developing an algorithm for functioning of the system and software with the best quality indicators. Business game is conducted in two stages. At the first stage, the participants present the analytical and design part of the task, provide a

qualitative and quantitative justification for the choice of tools. At the second stage, the protection of the project as a whole is carried out, a developed system is presented, an efficiency analysis is conducted.

Terms of work on the project are as follows: independent work of participants in the play group; counseling with teachers and external specialists;only the conclusions and results are presented to the presentation.

The schematic structure of the project is presented in Table. 2.

Table 2

The structure of the business game

Structures are part of the project	Stage	Content	Note
Analytical part	Object selection, goal setting, and performance criteria	1. Choice of research object; 2. Justification of relevance in light of the economic situation; 3. Determination of project capitalization indicators; 4. Determination of the general purpose of the project, decomposition; 5. Defining indicators of achievement of the goal; 6. Definition of performance criteria. 7. Risk analysis	Examples of objects: APC, trade, pharmacy network, construction, etc.
Project part	Description of project business processes, implementation of IT solutions	1. Structure of business processes of an object; 2. Organizational structure - the technology of the performers after implementation; 3. Scheme of information flows and document circulation; 4. Security policy.	
	Automation of the control system	1. Knowledge base; 2. SPPR - tools for the leader; 3. Evaluating economic efficiency	
Presentation of the project			

The task of the case is to develop a solution to automate the management system of an enterprise or its subdivision.

The process of the business game

Business game consists of the following stages, which are implemented sequentially.

1st stage

Preparatory stage. The department, together with the representatives of the enterprises, formulates the tasks with the choice of the game control system, based on the perspective and relevance of this development and taking into account the possible place of work or place of practice of students. At this stage, participants get acquainted with the general rules of the game, pre-allocated roles.

Second stage

Clarification of the technical and economic indicators of the control system chosen for the game. At this stage, the participants substantiate the choice of the object of the business game, agree with the leadership of the department, formalize the preliminary task of designing the algorithm for the functioning of the system and its software. The task is given to the entire group of participants. Students during the course of practice specify the technical and economic indicators of the object chosen for the game. They get acquainted with the existing decision of the task at the enterprise, collect technical and economic information on this issue, analyze it, note the shortcomings. Taking into account the revealed shortcomings in the existing decision the technical task is formulated for the creation of a new system. This task is consistent with the management of the ACS at the place of practice, as well as during ongoing consultations with the teachers of the department. The task is given to a group of students. At this stage, students are contemplating possible technical solutions to the task, collecting the necessary technical, economic, reference and regulatory documentation based on a pre-designed technical solution. The stage ends with a complete set of necessary information for the feasibility study.

Stage 3

The final choice of the object for the business game. Upon returning students from practice, the willingness of the academic team to conduct a business game is checked. Proceeding from the level of preparedness of students and their collected information on the objects under consideration, the final object of the research is selected, the technical task is specified, the tasks, conditions and rules of conduct of business pushing are formulated, according to the organizational structure of the game complex, roles are distributed, acquaintance with the functional duties, general instruction is conducted, rules are determined, work documentation is prepared, conditions of stimulation are agreed upon. The stage of development in each subgroup of the previous variants of algorithms of functioning of the system and its software is completed. Preparation for a business game of the whole group is carried out on practical classes.

Stage 4

The process of the business game. At this stage, in each group, the final choice of pre-developed algorithms for the functioning of the system and its software is carried out. Using the FIA method, they find optimal solutions, determine the feasibility of implementing this development at the enterprise, complete all documentation. For final decision, operational meetings are held at the heads of the groups, the meeting of the technical council at the head of the ACS. At this stage, the teachers of the Department of Economic Cybernetics actively assist in evaluating the developed variants of the algorithms of the functioning of the systems. They are obliged to participate in the meeting of the technical council.

To protect the business game commands that meet the following conditions are allowed: identified the object and problem area of the research; substantiated the relevance of the research; conducted a decomposition of goals, identified the main goal; analyzed the research

risks; formed a description of the business processes taking place at the research object; created an effective scheme of information resources and implemented it at the enterprise; taking into account possible risks related to information security; created a knowledge base; defined the decision support system for the manager; calculated the economic efficiency of the implemented solution. The business game ends with the presentation of the project. At this stage, teams must submit electronic materials that capture the results achieved, prepare a speech that briefly describes the work performed, and answer the jury's questions. After protecting the project, it is necessary to prepare a final report, which is submitted to the jury.

5th stage

Summing up. At this stage, the analysis and discussion of the results of the game is being evaluated, the group's activity is evaluated, the winner of the game is announced. An important element of the business game is reflection - an analysis by members of each group of their mistakes and achievements. Consider the functional responsibilities of the members of the game team in more detail (Table 3).

K the head formulates the task depending on the requirements of the enterprise, issues a technical task for the development of the algorithm of the system's operation, sets the ultimate goal, determines the time for the development of the task, a list of issues to be solved in it, monitors the observance of the interim regime, provides methodological assistance to the participants in the process of preparation to her and her conduct, supervises the process of preparation for the game, holds a meeting of the technical council, which, taking into account branch recommendations to its functions, considers the following issues: the importance of solving the problem Noah scientific problems, coordination and co-creative participants in the game, the technical level of development, the prospects for the introduction of design into production, its efficiency for the economy. In addition, he develops collateral situations, providing participants with the necessary source information.

The head of the team brings the technical task to the executors (it is subject to the developers, economist, planner, programmer), organizes and controls their activities, provides systematic methodological assistance in solving other tasks, conducts an operational meeting with the group, hears reports of performers on the work, checks and approves documentation to be transmitted to different services, prepares information for completed stages, analyzes and makes final decisions for the group, distributes frames, sets time for execution separately types of works, presents the arbiter proposals to encourage employees for the results achieved and bring them to account for the violations committed, prepares a draft order of encouragement.

The developer (analyst for data collection and processing) analyzes the requirements for the system, develops algorithms for its operation and functional scheme, elaborates the algorithm and functional scheme of the system, finds optimal solutions. Documentation is executed in accordance with the requirements of the state standard. In the game, he must prepare the following technical documentation for the technical board: the scheme of optimal algorithm for functioning of the system, optimal functional scheme.

Table 3

Functional division of responsibilities during a business game

No.	Position in the play team	Functional responsibilities	Type of competence	Corresponding competence of the graduate of OPP "Economic Cybernetics"
1	Head	collects a team, distributes roles, coordinates activities, manages the process, checks the team; is responsible for the selected subject activity and research object.	Integral	Ability to solve complex specialized tasks and practical problems in the field of socio-economic relations, which involves the application of modern theories and methods of system analysis, economic-mathematical modeling and information and communication technologies.
			General	From the data to interpersonal constructive interaction; consciously and socially responsible act on the basis of ethical considerations.
			Special	Ability to use analytical and methodical tools for substantiating economic decisions. Ability to independently identify problems of an economic nature in analyzing specific situations, suggest ways to solve them. Ability to in-depth analyze issues and phenomena in one or more professional fields within the specialty.
2	Analyst on information collection and processing	Investigates the database of the enterprise, collects the necessary analytical and statistical data, creates a knowledge base	Special	Skills to use modern sources of economic, social, managerial, accounting information for drawing up service records and analytical reports.
3	Specialist in process management and optimization of business processes	analyzes the business processes of the enterprise, distributes them by analytical component, optimizes process management	Special	To apply economic and mathematical methods and models for solving economic problems and computer processing technologies for solving economic problems, analyzing information and preparing analytical reports.
4	IT specialist	develops and improves the automated control system, optimizes information flows of the enterprise	spices cial	Ability to apply economic and mathematical methods and models for solving economic problems and computer technology of data processing for solving economic problems, carrying out analysis of information and preparing analytical reports.
5	Specialist in assessing economic efficiency	Investigates the economic efficiency of the primary system and the finished project	Special	Ability to use economic and mathematical methods for the analysis of an economic object with the help of knowledge gained and appropriate special methods.
6	Specialist in risk assessment	Investigates the risks that arise during project implementation	Special	Ability to use economic and mathematical methods for the analysis of an economic object with the help of knowledge gained and appropriate special methods.
7	Specialist in Information Security	analyzes the information security of the implemented project	Special	Ability to use economic and mathematical methods for the analysis of an economic object with the help of knowledge gained and appropriate special methods.

The programmer (IT specialist) works closely with the developer. He develops the structure of the software system, the algorithm and the text of the program. To the technical board, he prepares the following documentation: the structure of the program, the matrix of completion, the morphological card, the algorithm of the program and the program, a map of the technical level of the program.

Together with economists conducts a preliminary technical and economic analysis of individual software options. An economist (risk assessment specialist) works in close contact with the developer. He performs a feasibility study on the feasibility of this algorithm for the functioning of the system and its software. Together with the planner determines the complexity of the development of algorithms and software, calculates the estimated cost of development and the price of the algorithm, the expected scope of its distribution, the cost of machine-hour, the cost of annual work volume with comparable option, capital investment, economic effect and indicators of economic efficiency.

The gaming team is not an endogenous structure that does not interact with the outside world. He collaborates with specialists who co-ordinate the conduct of the business game. Experts from the analytical research of business processes check the definition of the problem area, the firm's program of activities, methodology for assessing economic efficiency.Experts on automation of business processes coordinate the creation of an automated decision support system, knowledge base formation.

Conclusion.

Thus, in the business game, each team member has the opportunity to acquire the knowledge and skills necessary for obtaining the competences of a graduate of the specialty "Economic Cybernetics". The participants of the game practice the method of functional-cost analysis in developing the optimal version of the algorithm of system operation, software, application of network methods in planning and management, acquire skills in determining the technical level of the system and its software. They also learn systems and economics, conduct technical, technical and economic documentation in accordance with the requirements of the State Standards. In the process of business game the work of the department of automated control systems is imitated.

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MODELING THE EFFECTIVENESS OF THE UNITED TERRITORIAL COMMUNITIES ACTIVITIES

Abstract. *The issue of management of united territorial communities (UTC), aimed at preserving the environment, becomes especially urgent with the tendency of reorienting the economy to the goal of sustainable development both for Ukraine as a whole and for its regions. Sustainable Development Strategy UTC numbers increases, which in effect reduces the effective management of social barriers and the pressure on the ecological environment. Therefore, the first thing to solve the problem of insufficient efficacy evaluation analysis, which takes into account the concept of sustainable development, which will simplify the implementation of possible vectors of sustainable development in Ukraine. Analysis of the effectiveness of UTC as an object of economic and mathematical modeling, with the help of fuzzy mathematics methodology, on the basis of which it is possible to improve the strategic and tactical management of UTC. The article deals with the concept of UTC. The competences and functions of the UTC in the course of decentralization reform are generalized. The fuzzy model for determining the effectiveness of UTC based on the decampling rate is constructed. It is proved that decentralization reform is the only way to provide new content to the existence of a rural network. The factors that lead to the incomplete use of community potential are analyzed. The ways of solving the problem of average UTC efficiency are proposed.*

Introduction.

In 2017, the Government of Ukraine presented the National Report "The Objectives of Sustainable Development: Ukraine", the essence of which is to highlight the basic indicators for achieving the Goals of Sustainable Development (GSD). Based on the specificity of national development, 17 global GSD were adapted in the report. All indicators of sustainable development are based on the principles of equality. For example, by 2030, all men and women will have equal rights to economic resources, as well as access to basic services, natural resources, possession and disposal of property (e.g. land), inherited property, relevant new technologies and financial services. Another important principle of sustainable development is the preservation of the environment, namely the preservation of the genetic diversity of seeds and cultivated plants, as well as of agricultural and domestic animals and their corresponding wildlife, including through the proper maintenance of various seed banks and plants at the national, regional and international levels.

Taking into account the foregoing and the fact that the strategy of sustainable development contributes to the increase of the number of settlements that have begun implementing comprehensive strategies and plans that must reduce the impact of social

barriers, mitigate the effects of climate change, increase resource efficiency, increase the ability to withstand natural disasters , the national movement for decentralization and setting up territorial communities is one of the possible vectors of sustainable development for Ukraine. Taking into account the current legislation in the broad sense, the territorial communities - the aggregate of Ukrainian citizens who live together in a city or village settlement - have the collective interests and the legal status determined by law. Unlike a simple territorial unit, a settlement that has the status of a territorial community is given certain rights. First and foremost, this is the right to self-government [2].

1. Actual scientific researches and issues analysis.

In the legal scientific literature, the problems of the territorial community were engaged by V. Babayev, M. Baimuratov, P. Bilenchuk, R. Brusak, V. Voronkov, V. Grigoriev, A. Goshko, G. Drobenko, V. Campo, I. Kozar, B. Kuibida, O. Lazor, Yu. Svirskyi and others. Some aspects of the legislative support of the territorial communities functioning were investigated by O. Batanov, V. Bordenyuk, P. Lyubchenko, V. Kravchenko, V. Kuibida, V. Pogorilko, O. Frytskyi and others. At the same time, a number of theoretical issues of the legal status of certain types of territorial communities, their structure and resource base in Ukraine remained beyond the attention of law scholars.

2. Uninvestigated parts of general matters defining.

Scientific publications devoted to the formation and functioning of the united territorial communities in the context of decentralization of public administration in Ukraine in the period from 2014 to 2016 are not enough. Various aspects of the analysis of this problem are presented in the revision of the ideology of the Ukrainian reform of the decentralization of A. Tkachuk, scientists and practitioners, among them: O. Kirilenko, B. Malinyak, V. Pismenny, V. Rusin, A. Pavlyuk and others. However, the economic issues of the united territorial communities' development, in particular, the determination of the united territorial community effectiveness, remain rather unconsolidated.

The purpose of the study is to analyze the territorial community effectiveness as an object of economic and mathematical modeling, by means of fuzzy mathematics methodology, on the basis of which it is possible to improve the united territorial community strategic and tactical management.

3. Statement of basic materials.

The definition of "territorial community" can be used in different meanings. Proceeding from Part 1 of the article 140 of the Constitution of Ukraine, which contains the definition of local self-government, the following types of territorial communities can be distinguished:

a) a territorial community of the village or a voluntary association of rural community residents of several villages;

b) a territorial community of the settlement;

c) a territorial community of the city.

The legal status of such a territorial community is defined by the Constitution of Ukraine, the Law of Ukraine "On Local Self-Government", the Civil Code of Ukraine, and other normative acts. The territorial community has the status of a legal entity that has the following competencies (Table 1).

Table 1

Competencies of a territorial community

Territorial Community as:			
a subject of civil and legal relations	*a subject of the budget process*	*a subject of entrepreneurial activity in the field of providing public services*	*суб'єкт фінансово-кредитних відносин*
Establishment of legal entities of public law (communal enterprises, educational institutions, etc.)	building own budget	establishment of communal property enterprises	placement of local loans
Establishment of legal entities of private law (business associations, etc.)	establishment of extra budgetary, currency, insurance, reserve and other targeted funds of money resources	joint activity with other subjects of entrepreneurial activity on the rights of joint operational activity or receipt of income in the form of dividends	obtaining loans in banking institutions
realization of economic operations			Establishment of communal banks, trust companies, insurance companies;
property relations			loan guarantee
entering into a commitment (territorial communities are responsible for their obligations by their property, except for property that can not be recovered in accordance with the law)			
process management			

The territorial community is established to support the main social functions, guarantees the social and economic rights of citizens, and their involvement in the management of the economy of the society. A variety of functions performed by territorial communities are diverse. The system of functions of territorial communities, functions similar to the functions of the state and functions that are solely or predominantly for the subjects of local self-government (Table 2).

Table 2

Functions of the territorial community

Function group of TC	Function of TC	The essence of the TC function
General	Politic	Ensuring the citizens' realization of the constitutional right to participate in state and public affairs. To self-government are only those functions that the state can delegate without the threat of political unity of the state
	Economic	Establishing a local economy. It is in the decision of economic issues of local importance, including in implementing social and economic development programs; managing communal property, local finance, etc.
	Socio-cultural	Solution of socio-cultural issues of local importance. Local self-government is directed by the institutions of education, health care, culture, which belong to the territorial team.
	Ecologic	Setting up local programs as well as participating in national and regional programs of environmental protection (Article 9 of the Law "On Environmental Protection" since 25.06.1991)
Specific	By management levels	Regional significance "territorial collective - territorial team"; National importance "territorial collective - state". International significance "territorial group - similar institutes of foreign countries"
	By objects of external activity of the territorial group	Foreign policy function - formation of an associated level of self-government (district, regional councils, international cooperation); Foreign economic function - conclusion of economic agreements with partners located outside the administrative-territorial unit, the establishment of joint ventures, free economic zones, etc. External social and cultural functions - implementation of socio-cultural projects involving representatives of different territories (professional and educational exchanges, mass and specialized tourism, cooperation of educational institutions). External ecological - realization of interterritorial ecological projects.
	In the system of links "territorial collective - local authorities", "territorial collective - state administrations"	Control function - control over the activity of councils by the territorial collective; Financial and budget function - the availability, possession and free disposal of financial resources by the territorial collective; Material and technical - management of communal property objects
	In the system of connections "territorial collective - a person" and "territorial group - bodies of self-organization of population"	information function, which is implemented through the development of municipal statistics, information service and municipal marketing

Given the breadth of the spectrum of functions assigned to UTC, one can conclude that decentralization reform is the only way to provide a new content to the existence of a rural network. Through the globalization processes, the employment needs in agriculture make up an average of 10% of the active population. If you do not create jobs within the reasonable availability of public transport 15-20 km, Ukraine is threatened with complete degradation of the village settlement network [3].

Taking into account the level of housing prices in the city, the village itself should be the place to ensure population growth. Providing the status of an administrative and territorial unit to a united territorial community will facilitate the transition to a rural household living culture. Thus, migration from villages will be completed, and in the future there will be a process of desurbanization, which is typical of the countries of Europe.

It should be noted that the process of formation and development of UTCs in the regions of the country is extremely uneven. There is a high level of disagreement between regions according to the dynamics of the creation of united territorial communities, and the use of the mechanism of community cooperation is based on the different attitude of local state administrations and local governments in the regions before the introduction of decentralization reform (Fig. 1).

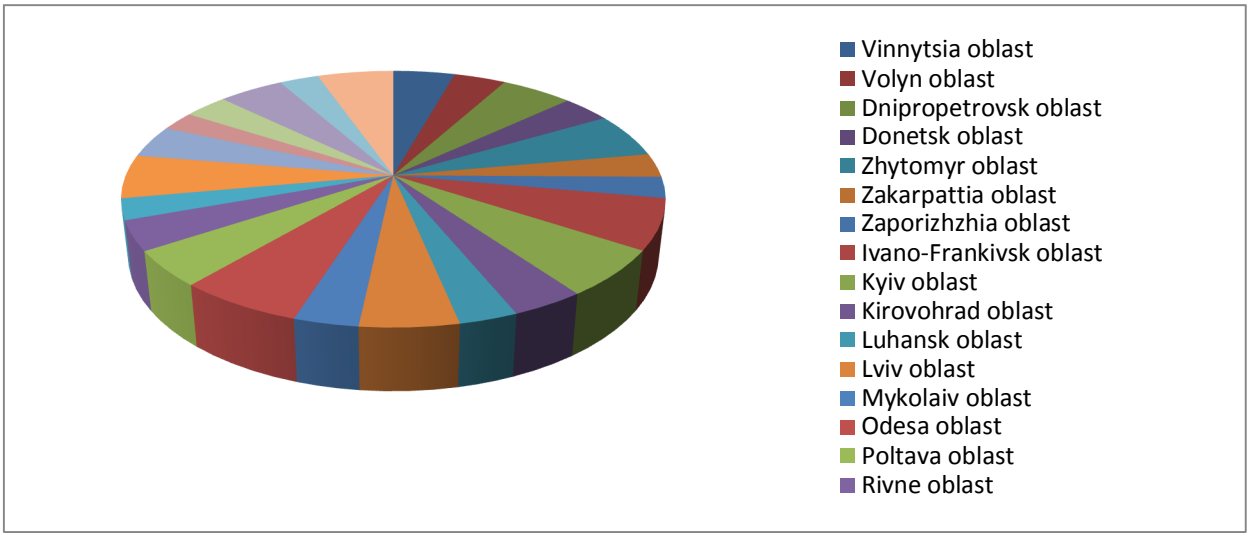

Fig. 1. The share of established UTCs in the oblasts of Ukraine

Source: *made up according to [3]*

The analysis shows that the revenues to the general fund of the local budgets of the UTC for 2016 increased almost sevenfold, compared with the revenues of 2015 to their local councils, which were included in the UTC. In order to be able to compare the effectiveness of different UTCs in Ukraine, both financially and socially and environmentally, we use a fuzzy modeling methodology. To this end, we will build a fuzzy model, the initial variable of which will be the indicator of the efficiency of a complex of functions, which will combine socio-political, economic and environmental effectiveness.

Definition of fuzzy model variables. So, for the fuzzy model we will use the following input variables: social efficiency (X_1), environmental efficiency (X_2), economic efficiency (X_3). The variable X_1 (social efficiency) is defined on the basis of the following assumptions. The main social task for UTC is the solution of socio-cultural issues of local importance (local self-government is assigned to the management of education, health care, and culture institutions belonging to the territorial collective).

To overcome problems related to social issues depends directly on the amount allocated to their financing. Therefore, it is proposed to evaluate the social efficacy of ITC as a ratio of the amount of expenditures for solving social issues and the number of participants in UTC. The indicator is calculated using the following formula:

$$ES = ML_{soc}/i, \quad (1)$$

where ES – social efficiency of UTC; ML_{soc} – costs of UTC of the current period on the development of the UTC infrastructure: hospital districts, fire brigades, educational institutions; i – number of UTC participants.

The rate of social efficiency in the EU is measured in the range (0;+∞).

There are several points of view on environmental performance indicators (X_2). Thus, scientists on the basis of classification (properties) determine the economic and environmental performance of the ecological efficiency [1].

Economic indicators express the total cost of natural resources used by UTCs, the cost of natural resources per unit of services / products, expenditures on environmental protection measures and compensation of losses, expenditures based on pollution of the environment by emissions, waste, drainage, etc.

One of the main economic indicators of ecological development is the decoupling rate, which is calculated using the formula:

$$DI = \frac{(EP_{end}/DF_{end})}{(EP_{beg}/DF_{beg})} \quad (2)$$

$$\mathrm{D} = (DI)^{-1}$$

where DI – decoupling index; EP_{end}, EP_{beg} – amount of the consumed resource (for example, sown fields for UTC) for the current and the baseline period; DF_{end}, DF_{beg} – the indicator of economic growth (yield of UTC) for the current and the baseline period; D – indicator of effective use of resources (for a balanced management of economic and environmental development, the indicator is more than 1).

Environmental indicators characterize the significance of harmful effects on the environment due to the use of natural resources and pollution of the environment by emissions, wastewater and waste. Among ecological indicators, the quantity and concentration of harmful substances in emissions, drains and waste, probability of emergency emissions, wastewater, and waste under UTC operation are indicated. To calculate the environmental performance, we use the following formula:

$$P = W_p / W_n \quad (3)$$

where P – indicator of the environmental pollution; W_n – amount of of harmful substances emissions in the current period (t/м^2); W_p– amount of harmful substances emissions in the past period (t/м^2).

Thus, in the assessment of environmental efficiency, it is necessary to take into account both indicators, so for its calculation we will use the following formula:

$$EM = P * a + D * (1 - a) \quad (4)$$

where EM – environmental performance indicator; a – correlation coefficient of environmental pollution and cost-effectiveness of resources (in further studies is equal to 0.5).

Indicator of ecological efficiency of OTG will be defined as follows:

– a high level of pollution (0; 0.8) occurs in very poor conditions for the ecological situation on the territory of UTCs;

– an average level (0.8; 1.2) is inherent in an unsustainable environmental system;

– a low level (1,2; 1,6) is inherent in UTCs with moderate development of ecological situation;

– a very low level (1,6; +∞) describes a favorable situation in UTCs for ecological prosperity.

X_3 (economic efficiency) shows the final beneficial effect of the means of production use and living labor, as well as their aggregate investments.

As a result, the notion of efficiency is determined by the objective law of saving working time, which is the fundamental substance of wealth and measure of expenses necessary for its accumulation and use by the society. But the economic efficiency of UTCs cannot be calculated as the ratio of output to spent resources, since UTCs are engaged in improving the administrative and territorial structure, mastering and efficient use of all available resources, infrastructure development and monitoring the ecological state.

Therefore, it is proposed to calculate the economic efficiency as the average efficiency value for all members of the UTCs:

$$E = PR_{ave} / ML_{ave} \quad (5)$$

where E – economic efficiency indicator; PR_{ave} – the average value of the profit received by the participants of the UTCs; ML_{ave} – the average value of production costs for the participants of the UTCs.

The economic efficiency of managing UTC resources can be determined as follows:

– a high level of efficiency (1,5; +∞) occurs when the management of resources in the UTCs is carried out at a high level;

– an average level (1, 1,5) of the resources use in the UTCs indicates an economic rationality;

– a low level of innovation (0; 1) management in UTCs takes place when the use of resources requires immediate changes.

Thus, the definition of input variables of the fuzzy model is completed.

Under conditions of economic growth, according to the concept of sustainable development, we will use the fuzzy variable "Level of Efficiency of Sustainable Development" (*LESD*).

We'll introduce the notation:

$$\text{LESD}(rp_t) = \{\left(E_q, \mu_{E_q}\right), q = \overline{1,3}\}, \quad (6)$$

where $E_q \in T^{\text{LESD}}$ — linguistic value of the variable LESD, T^{LESD} — term set, $T^{\text{LESD}} = \{H, C, B\}$, that is, low, average or high level of UTCs efficiency.

We turn to the phasing procedure, which determines the input parameters as fuzzy variables.

Definition of input variables linguistic values (classification criteria).

To form the knowledge base when constructing a model on the basis of fuzzy logic, we will use three terms for each variable. To evaluate all the indicators x_i , $i = \overline{1,3}$, which characterize UTCs management effectiveness, we will form a single scale of three qualitative terms: H – a low level of the indicator, C – an average level of the indicator, B – a high level of the indicator.

Construction of the variables affiliation functions. Areas for defining the input variables are determined by the ranges of possible values of the relevant indicators:

$$-\infty \le X_1 \le +\infty,$$
$$0 \le X_2 \le +\infty,$$
$$0 \le X_3 \le +\infty.$$

In this paper, the definition of the kind of the affiliation functions for input variables is carried out on the basis of direct and indirect methods: on the basis of empirical analysis and experts opinion. When you choose, the triangular affiliation function allows you to emphasize the achievement of the maximum value of a function at one point of the variable, and the trapezium-visible function is to set the kernel of the fuzzy set in the form of an interval. Both functions are formed using piecewise linear approximation.

Based on expert and empirical data, a trapezoidal affiliation function was selected.

Definition of input variables linguistic values. To form a knowledge base when constructing a model on the basis of fuzzy logic, we will use three terms for each variable (Table 3).

Table 3

Parameters of the functions of the input variables affiliation

Input variable	Variable name	Linguistic value of the indicator	Definition of the term set
X_1	*Social efficiency*	Low level	0 ; 0 ; 0,3 ; 0,4
		Average level	0,2 ; 0,35 ; 0,55 ; 0,75
		High level	0,5 ; 0,65 ; 1 ; 1
X_2	*Environmental efficiency*	Low level	0 ; 0 ; 0,8 ; 1,26
		Average level	0,8 ; 1,26 ; 1,35 ; 1,46
		High level	1,35 ; 1,46 ; ;
X_3	*Economic efficiency*	Low level	0 ; 0 ; 0,5 ; 1,1
		Average level	0,5 ; 1,1 ; 1,4 ; 1,6
		High level	1,4 ; 1,6 ; ;

To evaluate all the indicators, a single scale of three qualitative terms was formed: H - low level of the indicator, C - average level of the indicator, B - high level of the indicator. Similarly, the function affiliation for the output variable was defined. The definition of the affiliation function for input variables was performed using Matlab application software package (Fig. 2). To obtain the value of the LESD linguistic variable, we'll apply a compositional rule proposed by L. Zade, which formalizes a fuzzy logical conclusion regarding various values of the indicators of economic, social and environmental efficiency.

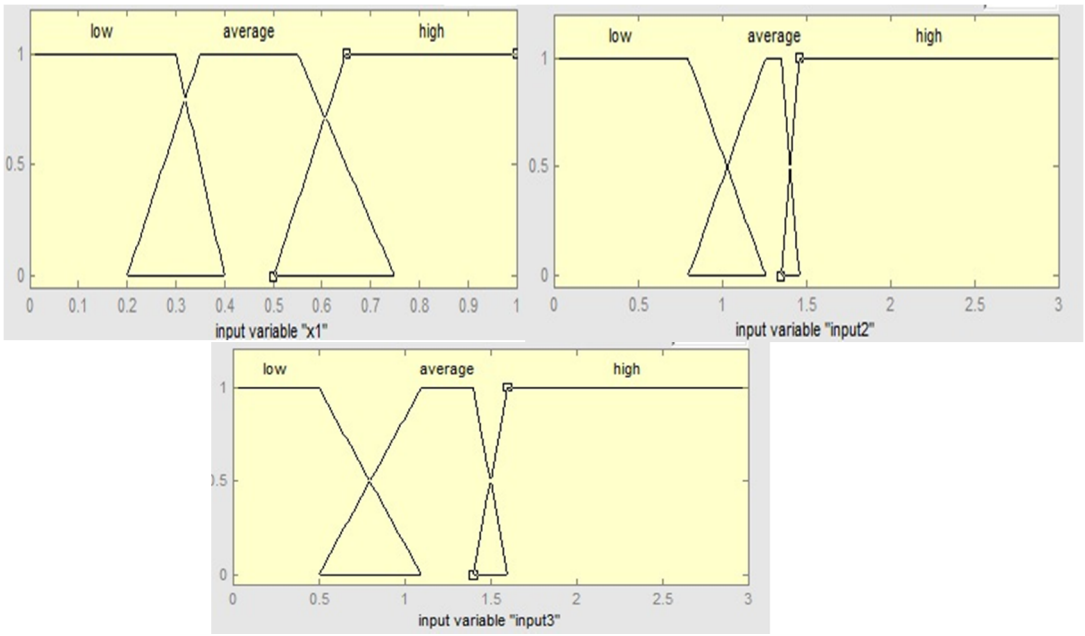

Fig. 2. Functions of the input variables affiliation of the fuzzy model

Source: *made up by authors*

For its application, we will develop a knowledge base based on the principle of the Mamdani algorithm. For example, the rule for acquiring a high value LESD will be like this:

If ((X_1 = "High") AND (X_2 = "High") AND (X_3 = "High")) OR ((X_1 = "High") AND (X_2 = "Average") AND (X_3 = "High")) OR ((X_1 = "High") AND (X_2 = "High") AND (X_3 = "Average")) OR ((X_1 = "Average") AND (X_2 = "High") AND (X_3 = " High ")), then (LESD =" High ").

Similarly, all other rules for determining affiliation are formulated. The result of a fuzzy model is presented on Fig. 3

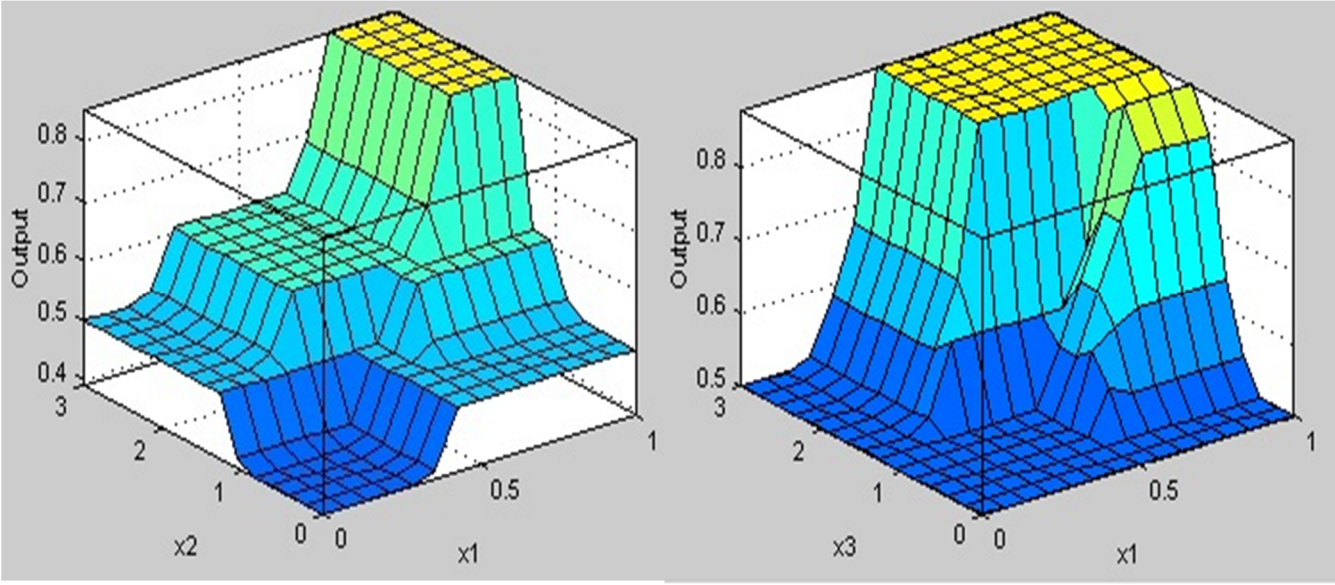

Fig. 3. Surfaces of the fuzzy model

Source: *Made up by authors*

A study on UTC in Ukraine (280 out of 366 communities) suggests that most of them have an average efficiency.

Identifying the potential problems of the formation and development of UTCs in Ukraine [3], which leads to a decrease in the territorial community's effectiveness, we will present the correspondence between tasks for further UTC functioning and possible ways of their solution (Table 4).

Indicated in the table 4 main functions of the communities, namely politic, economic, socio-cultural and ecologic and these functions cannot be fully implemented without further reengineering of the economic and social UTC subsystems.

Table 4

Problems of UTC functioning and ways of their solution

UTCs Existence functions	Appropriate problem of UTC development	Goal of UTC in the short and medium term	Goal in the long-term according to the concept of sustainable development	Possible ways to solve them
Politic	Imperfect legislation to unite communities	Further voluntary formation of UTCs	Ensuring the territorial integrity and sovereignty of the country	Formation and improvement of the legal framework for the decentralization of the power
		Improvement of the administrative and territorial system		Solving the issue of expediency of areas whose boundaries completely coincide with the limits of UTCs formed on their territory
				Enlargement of districts
Economic	Inability to dispose all UTCs resources available	Mastering all available UTCs resources	Ensure economic development of the whole territory of the state; To strive for economic growth not to be accompanied by deterioration of the environment	Setting up a unified system of planning and forecasting development of the state, regions and communities
				Simplify project financing
Socio-cultural	The unevenness of the development of cities and regions of the country	UTCs infrastructure development: hospitals, fire departments, educational institutions, etc.	Overcoming poverty in depressed areas of the country	Financial incentives for the regions
				Education (providing special economic and legal knowledge) of individuals involved in the work of UTCs
Ecologic	Presence of uneven pollution of the environment of the country's regions	Monitoring the ecology in UTCs and development of a long-term plan for improving ecological situation	Ensure the conservation, restoration and rational use of terrestrial and inland ecosystems	

Conclusions.

Thus, it was discovered that united territorial communities are a real opportunity for Ukraine to carry out complex reforms that lead to radical changes of the old system. As a manifestation of decentralization, communities are able to implement the sustainable development strategy for 2016-2030. At the same time, the efficiency of the united territorial communities is at an average level now due to the so far short history of decentralization reform, as well as incomplete use of all resources, which are available in the community.

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PROFESSIONAL COMPETENCY OF MODERN SPECIALIST: MEANS OF FORMATION, DEVELOPMENT AND IMPROVEMENT

Monograph

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