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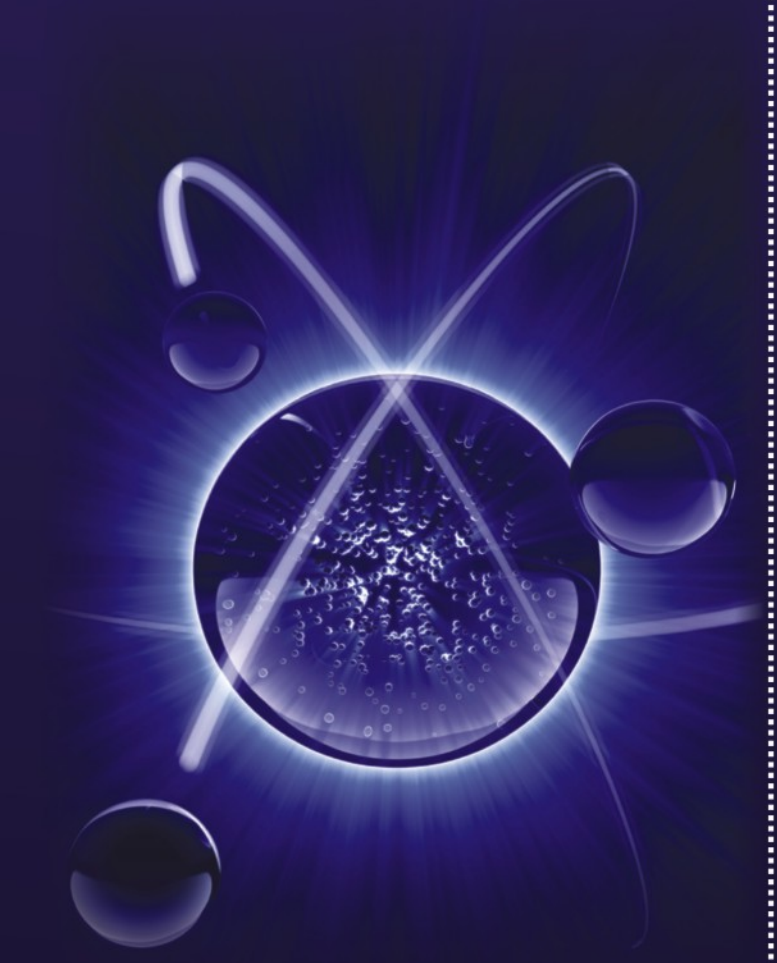

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The collection of papers justifies theoretical and practical issues of developing professional, entrepreneurial, artistic and other competencies in pupils / students from professional education schools, pre-tertiary vocational and higher education institutions. It reveals methodical aspects of developing legal and technological culture and safety culture of professional activity. It analyzes the content and specifics of applying innovative educational technologies: distance and interactive technologies, self-management, development of professional competency in masters of vocational training, development of readiness in pedagogical staff to standardize the training of junior specialists. It describes the project management software in professional education schools and the use of the Classtime platform under the conditions of inclusion. It discloses the characteristics of implementing results-oriented management in the activities of professional (vocational) education schools. It presents the results of scientific, pedagogical analysis on reforms in vocational education and training in the early years of Ukraine's independence (1991-2000) and the experience of the People's Republic of China in determining the results of professional training of bachelors in business economics.

For scientists, scientific and pedagogical and pedagogical stuff of the vocational, pre-tertiary vocational and higher education institutions, training centers of enterprises, institutes of postgraduate pedagogical education, educational (scientific) -methodical centers of vocational education, postgraduate and doctoral students.

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Part I

THEORY AND METHODOLOGICAL FUNDAMENTALS OF VOCATIONAL EDUCATION AND TRAINING DEVELOPMENT

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INSTITUTE OF VOCATIONAL EDUCATION AND TRAINING OF NAES OF UKRAINE

METHODOLOGICAL PRINCIPLES OF DEVELOPING PROFESSIONAL COMPETENCE IN FUTURE ELECTRICAL TECHNICIANS AT AGRICULTURAL COLLEGES

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Abstract.

Relevance: the need to justify the methodological foundations for the future professional competence of electrical technicians is determined by the needs of qualified specialists in the agricultural sector.

The *purpose* of the study is to substantiate methodological principles, to specify and to cover the scientific approaches to the formation of professional competence of future electrical technicians in agricultural colleges.

Methods: theoretical research methods: analysis of psychological and pedagogical literature on the problem – to identify the state of the problem under study in pedagogical theory and practice; analysis, synthesis, abstraction, generalization – for substantiation of methodological bases of formation of professional competence of future electrical technicians.

Results. The article highlights a number of methodological approaches, such as: systematic, competent, humanistic, cultural, axiological, personality-oriented, activity-developmental, environmental, information, integration, technological, synergistic approaches, which it is expedient to rely on in the process of analysis of professional competence of future specialists of technical and technological specialties in agricultural colleges. The content and essence of these approaches are considered. This made it possible to set the basic requirements for the formation of professional competence of future electrical technicians and understanding of the construction of the educational process in the higher school for the preparation of these specialists.

Conclusions: the methodological principles for the future professional competence of electrical technicians should be based on the unity of such basic scientific approaches as competent, personality-oriented, activity-developmental, humanistic, cultural, axiological, informational, and, to a lesser degree, synergistic approaches.

Keywords: *methodological approach, professional competence, future electrical technician, agricultural college.*

Introduction. Changing the paradigm of agricultural development implies dynamic transformations of the main landmarks of agricultural activity of industries and other economic entities of Ukraine and the world. Therefore, there is a need for modernization of agrarian professional higher education, which is the basis for reviewing the existing methodological requirements for the professional training of future junior specialists in technical and technological specialties, in particular electrical technicians. It is also important to determine the reserves for improving the quality of training of specialists in technical and technological specialties in agricultural colleges. In this aspect, the problem of developing and implementing basic scientific approaches to the formation of professional competence in them appears as a priority tendency to improve professional higher education. The need for substantiation of methodological bases for the formation of professional competence of future electrical technicians is determined by the needs of qualified specialists for the agricultural sector.

The value of a professional higher education is to prepare students for their participation in socio-cultural and professional activities, to form their outlook, to develop a system of values and ideals that determine the civic position of each individual, their attitude to

the world and determining their place in it (Yershova, 2015).

Sources. The basics of a competence-oriented approach to learning are substantiated in the works of Amelina S., Bezpalko V., Goncharenko S., Zeer E., Zimnaya I., Ziazun I., Ovcharuk O., Kalashnikova S., Lugovoi V., Nichkalo N., Pukhovskaya L., Radkevich V., Khutorsky A., Yagupov V. The conceptual principles of professional training of specialists in technical and technological specialties are motivated in the works of Bender I., Bryukhanova N., Duganets V., Demin A., Demin O., Koloska I., Koshuk O., Lazarev M., Luzana P., Manka V., Martseva L., Nagirnoho Y., Romanovsky O., Chernylevsky D., and others. Theoretical and methodological aspects of professional training of future junior specialists in technical and technological specialties are covered in the works of Zueva O., Ishchenko T., Kostyuk D., Kovtun T., Koshuk O., Litvinchuk S., Pashchenko T., Pogoreloi N., Ryabets V., Khomenko M. and others.

Despite the considerable number of scientific works devoted to various aspects of professional training of specialists in technical and technological specialties, the methodology of this process remains one of the most controversial. Obviously, the problem identified today requires concretization and theoretical generalization of the established scientific provisions, the use of the results of new scientific explorations and methodological approaches.

The purpose of the study is to substantiate methodological principles, to specify and to cover the scientific approaches to the formation of professional competence of future electrical technicians in agricultural colleges.

Methods. The following theoretical methods were used in the study: analysis of the psychological-pedagogical literature on the problem (to identify the state of the problem under study in pedagogical theory and practice); analysis, synthesis, abstraction, generalization (for substantiation of methodological bases of formation of professional competence of future electrical technicians).

Results and discussion. Today, there are a large number of scientific approaches to the organization of educational activities in the system of vocational education, including professional higher education. Traditional approaches are largely knowledge-oriented. To a lesser extent, attention is paid to mastering practical skills, and even less so to the formation of personal qualities and adequate behavior necessary for professional activity. As a result, future electrical technicians are not sufficiently able to use knowledge to perform their professional activities. There are many approaches in science that are aimed at knowing the objects of reality. These or other approaches fully take into account the features of a particular object, contribute to the fullest realization of the goal of his knowledge.

All methodological approaches are aimed at overcoming certain shortcomings of the traditional vocational training system. Let us briefly dwell on the peculiarities of the application of these approaches in the study of the phenomenon.

The systematic approach in the preparation of electrical technicians in agrarian colleges is aimed at discovering the integrity of pedagogical objects, identifying various types of communication in them and bringing them into a single theoretical picture.

According to many researchers (Bezpalko V., Litvinchuk S., Neverdova N., etc.) the systematic approach in the organization of the educational process in college is aimed at studying the problems of synthesis of meaningful and formal methods of systematic pedagogical research, improvement of methodological culture, integration of various ideas about pedagogical system, the integrity of its models.

The constituent components of a systematic approach make it possible to anticipate a continuous transition from a common to a partial basis which reveals the true purpose and is realized through professional standards, content, functions and a set of methods. Allows you to predict the creation of an emotionally favorable atmosphere, psychological comfort for each student, improving the methodology and technology of the educational process, creates organizational and pedagogical conditions for professional formation and actions of the mechanism of professional self-education and self-education.

For this reason, the systematic approach relies on components and provides for a continuous transition from joint to partial based on a true goal. It also gives an opportunity to consider the pedagogical process in terms of its structure, content, functions, set of methods, system connections, the possibility of transforming the professional skills of electrical technicians into professional activities.

The process of forming the professional competence of the future electrical technician according to the systematic approach is based on the individual characteristics of students, offers various forms of organization of the educational process (lectures, practical classes), also covers classroom, extra-auditory and research work, self-education and professional self-education.

We have outlined the main tasks of formation of professional competence of preparation of future junior specialists of technical and technological specialties: mastering of the holistic system of technical and technological knowledge necessary for competent conducting of classes, formation of technical thinking; acquisition of technical supervision of electrical equipment, electric machines, transformers; devel-

opment of students' creative abilities, skills to use the acquired knowledge to solve new technological problems.

The practice of training future electrical technicians in professional higher education confirms that the content of training on the basis of a systematic approach should cover fundamental concepts that reflect the specifics of electrical systems, principles of their construction and operation, and contribute to the understanding of basic technological approaches. Studying special disciplines in college gives the opportunity to form a harmoniously developed specialist who combines electrical engineering skills related to the ability to solve technical tasks, systematically think, design and design electrical installations, to understand the issues of economics, occupational safety, ability to work. Specific technological systems in this approach should illustrate the practical application of the general provisions.

The competency approach focuses on educational outcomes. Moreover, the result of education is not the amount of information learned, but the ability of a person to act in various problematic situations (Khutorskoy, 2003). Current trends in evaluating the effectiveness of education are spread by three models:

– *content*: curriculum (syllabus) is a set of "knowledge" opportunities of those who are taught that can be implemented in educational and professional activities;

– l*earning process*: real phenomena and processes occurring in the educational process when the cognitive activity is carried out are subject to analysis;

– *results*: a set of competencies (knowledge, skills, attitudes, attitudes, etc.) mastered by those who have been taught.

The need to include a competent approach in the system of professional higher education is determined by the change in the educational paradigm as a set of values, installations, equipment, etc., which is characteristic of future electrical technicians.

The main goal of modern professional higher education is to make the future specialist a subject of professional activity on the basis of mastering professional competence, capable and ready for personal and professional self-actualization in the modern labor market. The peculiarity of professional activities of electrical engineering in the future is associated with a wide range of mutually agreed and interacting professionally important qualities, such as: professional intelligence and practical thinking, professional mobility and dynamism, initiative and constructiveness, the desire for constant self-education and self-reliance with self-education. independent decisions, ability to successfully adapt in social and professional sphere, work in a team, etc.

Using a competent approach, you can analyze all aspects of training – motivational, meaningful, evaluative. Yes, the ideas of a competency approach have become pivotal today to developing a new system for evaluating the educational attainment of future professionals (Luzan, 2018).

In the educational process, new forms and methods of professional training of specialists, new ways of educational activity that promote mastery and development of a set of key, general-professional, specialized-professional competences should be introduced. Within the motivational aspect, the psychological factor is important – the ability of the future specialist to adequately respond to changes in the professional environment, flexibility in decision-making, departure from the stereotypical thinking, etc.

Person-centered approach is a methodological orientation in the teaching activity of the college teacher, which, based on a system of interrelated concepts, ideas and methods of action, supports and provides processes of self-knowledge, self-improvement and self-realization of personality. By applying this approach, the teacher makes major efforts to develop for each student the unique personal qualities of a future professional with a technical focus.

This approach should significantly change the educational process, make it humane, fill with high moral and spiritual experiences, affirm relationships of justice and respect, maximize the potential of each student, stimulate them to personal development.

The essence of a personality-oriented approach in professional higher education lies in the student's conscious self as a person, in the identification and disclosure of their own capabilities, the formation of self-awareness, in the realization of personally-meaningful and socially acceptable self-realization, self-realization, self-affirmation.

Person-centered approach involves creating the conditions for self-realization and self-development of the individual. The teacher should not only explain the teaching material, but also show how to effectively operate knowledge, think critically, actively act in non-standard situations, make quick decisions. At laboratory-practical classes, consultations, excursions the teacher has the opportunity to pay attention to each student, which helps to master the content of vocational training in the conditions of professional higher education.

Specific in the application of a personality-oriented approach to the formation of professional competence of future electrical technicians is the ability to implement leading personality-oriented forms of training, namely: to promote the interest of each student in the work of the group through a clearly, clearly and accessible formulated motivation; use of various

forms and methods of organization of student-oriented learning activities; encouraging students to speak up, using different ways to solve situational tasks without fear of making a mistake or getting the wrong answer; creation of pedagogical situations in classes that allow to show initiative, independence, to support the student's desire to find his own way of work, to analyze and evaluate the work of others; use of various types of cognitive activity, as well as motivational, content-operational and strong-willed components of cognitive independence of electrical technicians.

Activity-development approach is implemented according to the scheme "need-motive-action-development". The implementation of this approach requires the acquisition of knowledge, skills and competences that represent the practical experience of electrical technician. After all, the knowledge for electrical technicians is to obtain more complete and in-depth information, characterized by systematic, efficient, flexible and durable storage; ability to reason and express their own thoughts; improvement of professionally important qualities such as perseverance, responsibility, commitment.

Thus, from the point of view of activity-developmental approach, two consecutive tasks of pedagogy – transfer of knowledge and formation of skills to apply them, are replaced by one – acquisition of knowledge simultaneously with mastering of ways of action with them. After all, the learned knowledge is the knowledge, turned into a mental action: first, objects and concepts are transformed as a result of interaction, then they (subject knowledge) are rethought (the student begins to operate on them) and skills (the mode of action is learned). In practice, students can accomplish this task in the form of technical calculations for the choice of electrical equipment, drawing a circuit diagram, solving situational problems, and more. At the same time, it is advisable to consider the content of teaching not only as a system of knowledge, but also as a well-defined system of actions, which is important in the pedagogical design of the teacher's activity (Atanov and Pustynnikova, 2002, pp. 14-96).

Modern pedagogy offers an *environmental approach* as a theory and technology of direct control (through the environment) of the processes of education and development of the student's personality; as a system of action by the entity aimed at transforming the environment into a means of designing and diagnosing learning and upbringing.

The modernization of the education system and the whole of society depends on the quality and effectiveness of pedagogical education. Therefore, in accordance with modern requirements, the problem arises of creating an effective educational environment for the professional training of future electrical technicians in agricultural colleges. In order to solve it, it is necessary to create a mechanism for real changes in pedagogical education, in particular, to develop a general strategy for designing the educational environment of vocational training.

Today, the vocational training model for electrical technicians requires a change in the educational environment. Its main characteristics should be: conceptual integrity of learning and development at all levels of learning; multidimensionality and sufficiency of information; moral and value completeness that enables any subject of the modern educational environment to create not only its own trajectory of learning, but also moral education and development; providing communication conditions at the linguistic, intercultural, interpersonal, ethnic and technical levels.

The humanistic approach to teaching requires that students acquire a significant amount of study material at a sufficiently high level. In analyzing the psychological and pedagogical literature, it can be traced that the historical traditions of interpreting the term "humanistic" imply a characteristic of a system of values that exalts a person, promote his or her good, happiness, freedom and justice (Ball G., Ohneviuk V., Panfilova T., and etc.).

The education of a highly professional specialist, a person with diverse views, deep knowledge, broad outlook and political culture is an urgent problem of today. Therefore, the process of study in a modern college should ensure the individual development of each student, promote successful learning, the maximum development of his abilities and talents.

Developing the basic provisions of the *axiological approach* in pedagogy as the basis of humanism, Vyshnevskyi O., Vitvytska S., Ziaziun I., Sukhom-lynskyi V. and others note its leading role in the formation and formation of personality of future agarists. An important place in the formation of the professional competence of electrical technicians is played not only by abilities, skills and abilities, but also by motivation, professional interest, attitudes, needs that are directly formed under the influence of the value-motivational sphere of the individual. Therefore, the process of forming the necessary competencies of the future specialist in the agricultural industry can not be imagined without recourse to the values, mechanisms and technologies of transformation of social values into personal ones. Values determine the meaningful basis of vocational education, where the educational process is not a simple transformation of knowledge, but the arming of the individual with the "methodology of creative transformation of the world" (Shukshunov, Vziatyshev, and Romankova, 2011).

It is worth paying attention to the growing role of the axiological approach in the modern educational process, where the demands of a harmoniously developed personality emerge from the regularities of rapid development of social and technological progress. The moral, intellectual, scientific, technical, spiritual, cultural and economic potential of any society depends directly on the level of development of the educational sphere, which today aims at realizing humanistic ideals in education by improving the social, pedagogical and economic efficiency of its functioning (Nikohosian and Asieieva, 2017).

*The cultural approach i*s aimed at mastering the basics of economic, legal, political, aesthetic, ecological, professional culture, vision of prospects of development of different branches of knowledge, skills of scientific organization of research and introduction of them into their future professional and technical activities. It should be noted that the problems that arise in the process of forming the technical competence of electrical technicians are that the young man at the end of secondary school already has the appropriate baggage of life and educational competencies, but has not yet decided on their application. Then there are contradictions that help you to orient yourself, to create yourself, to develop yourself and to improve yourself. Therefore, teachers of special disciplines should also pay attention to the cultural development of the student, his desire for self-improvement.

One of the leading factors in the selection of content training professionals is to synthesize and dialectically interconnect the prospects for the development of education, production, technology, labor, the market of skilled personnel and culture. It should also be remembered that a skilled worker is not only a specialist but also a cultural personality. Therefore, as many agricultural colleges as possible have extra-curricular activities.

The information approach in the preparation of electrical technicians is a specific modern means of cognitive and practical activity, which focuses the expert's attention on the study and use of all types of information, information aspect of any phenomena.

Scientists have found that information technology is the basis of informatization of education, which is intended to: improve the quality of learning through better use of available information; increasing the efficiency of the educational process on the basis of its individualization and intensification; introduction of active teaching methods, enhancement of creative and intellectual component; achievement of the necessary level of professionalism in mastering the means of information technologies; integration of different activities (educational, research, methodological, scientific, organizational); ensuring continuity and continuity in training; preparation of participants of the educational process for life in the conditions of information society; enhancing the professional competence and competitiveness of future specialists in different industries; development of didactic materials for distance learning; improvement of software and methodological support of the educational process (Hurevych and Kademiia, 2005; Kademiia and others, 2008).

For the study of professional competence of the individual, the provisions of the information approach have considerable possibilities in the context of the use of laws, functions, properties, methods and means of information to form the cognitive component of the phenomenon under study (Koshuk, 2017).

In addition to characterizing the basic scientific approaches, in the formation of the professional competence of future electrical technicians, we must consider some others. In particular, it is an *integrative approach* that allows you to make connections between knowledge in the various humanities and technical disciplines. Its purpose is the holistic and versatile development of the content of training (in our case – the professional competence of future electrical technicians). The use of an integrative approach in modern professional higher education is a very important aspect of training future professionals, as it enhances students' professional motivation, stimulates their creativity, helps identify and utilize personal resources to succeed in future professional activity. The period of the highest creative success, professional skill – is a harmonious combination of previously achieved skills and conscious opportunities, the discovery of new professional peaks and abilities, the development of creativity (Kovalchuk, 1999).

The technological approach characterizes the orientation of pedagogical researches on optimization, improvement of activity of training, increase of its efficiency, instrumentality, intensity. Teaching technology takes into account the objective didactic patterns and thus, in specific conditions, corresponds to the result of the activity previously set goals. The technological approach in the professional activity of future electrical technicians promotes the use of such means and methods of teaching, that during the performance of students educational and socially significant activity in them intensively developed consciousness, theoretical and practical thinking. Based on the generalizations, it can be argued that the technological approach to the study of the problem of formation of professional competence of electrical technicians involves changes in the organization of the educational process, its improvement taking into account the current level of development of pedagogical technologies.

A synergistic approach is the basis for a holistic perception and awareness of the world, forging

synergistic ideas about the openness of the world, for scientific and technological development, for the integrity and interconnectedness of man, technology, nature and society. As a result of the synergistically thought-out process of education, the personality of the learner is deeply restructured. Training proceeds as a specific modification of already existing behaviors in the direction of the outlined task. Synergistic knowledge, focused on solving new educational problems, becomes the basis of search activities. Based on this knowledge, we can build models of expectations and predictions about the nature of social and cultural processes, their place in the person, in particular, his place in the system of values that can not be linked and which one should choose.

Conclusions. The methodological foundations for the formation of the professional competence of future electrical technicians should be based on the unity of such basic scientific approaches as: competence, personality-oriented, activity-developmental, humanistic, cultural, axiological, informational, and, to a lesser extent, technological, technological requirements approaches. The prospects for further scientific research are connected with the justification and development of the project of purposeful formation of professional competence of future electrical technicians in the agricultural college.

List of references

Атанов, Г. А. и Пустынникова, И. Н., 2002. *Обучение и искусственный интеллект, или основы современной дидактики высшей школы.* Донецк: Изд-во ДОУ.

Гуревич, Р. С. та Кадемія, М. Ю., 2005. *Інформаційно-телекомунікаційні технології в навчальному процесі та наукових дослідженнях*: навч. посібник. Вінниця ООО «Планер».

Єршова, Л., 2018. Трансформація системи цінностей учнівської і студентської молоді в контексті реформування вітчизняної професійної освіти. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка*, 16, с. 162-168.

Кадемія, М. Ю., Козяр, М. М., Ткаченко, Т. В. та Шевченко, Л. С., 2008. *Інформаційне освітнє середовище сучасного навчального закладу: навчально-методичний посібник.* Львів: Вид-во «СПОЛОМ».

Ковальчук, Г. О., 1999. Формування професійних педагогічних умінь майбутніх викладачів економіки. *Педагогіка і психологія*, 1, с. 98-103.

Кошук, О., 2017. Формування професійної компетентності майбутніх інженерів з механізації сільського господарства: концептуальний аспект. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка*, 14, с. 51-60.

Лузан, П. Г., Пащенко, Т. М., Ваніна, Н. М. та Колісник, Н. В., 2018. Стандартизація професійної освіти на основі компетентнісного підходу *Science Rise*, 5 (25), с. 32-35.

Нікогосян, Л. Р., Асєєва, Ю. О., 2017. Аксіологічний підхід у системі професійно-педагогічної підготовки майбутніх фахівців медичної галузі. *Педагогіка*, [online] 4, с. 33-37. Доступно: <: http://dspace.pdpu.edu.ua/bitstream/123456789/802/1/>[Дата звернення 25 Грудень 2019].

Пащенко, Т. М., 2005. Самостійна робота як засіб активізації навчально-пізнавальної діяльності студентів. В: *Реформування системи аграрної вищої освіти в Україні: досвід і перспективи.* Всеукраїнська науково-практичної конференція. Київ, Україна, 21 Квітень 2005. Київ: НАУ.

Хуторской, А. В., 2003. Ключевые компетенции: технология конструирования. *Народное образование,* 5, с. 55-61.

Шукшунов, С. Е., Взятышев, В. Ф. и Романкова, Л. И., 2011. *Инновационное образование: идеи, принципы, модели*. Москва: МАНВШ.

Translation and Transliteration

Atanov, G. A. i Pustyinnikova, I. N., 2002. *Obuchenie i iskusstvennyiy intellekt, ili osnovyi sovremennoy didaktiki vyisshey shkolyi [Training and artificial intelligence, or the foundations of modern higher education didactics]*. Donetsk: Izd-vo DOU, [in Russian].

Hurevych, R. S. ta Kademiia, M. Yu., 2005. *Informatsiino-telekomunikatsiini tekhnolohii v navchalnomu protsesi ta naukovykh doslidzhenniakh [Information and telecommunication technologies in educational process and scientific researches]: navch. posibnyk*. Vinnytsia OOO «Planer», [in Ukrainian].

Yershova, L., 2018. Transformatsiia systemy tsinnostei uchnivskoi i studentskoi molodi v konteksti reformuvannia vitchyznianoi profesiinoi osvity [Transforming a system of values for pupils and students in the context of updating the Ukrainian professional education]. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPN Ukrainy. Profesiina pedahohika [The Scientific Journal of the Institute for Vocational Education of NAES of Ukraine],* 16, s. 162-168, [in Ukrainian].

Kademiia, M. Yu., Koziar, M. M., Tkachenko, T. V. ta Shevchenko, L. S., 2008. *Informatsiine osvitnie seredovyshche suchasnoho navchalnoho zakladu [An informational educational environment of a modern educational institution]: navchalno-metodychnyi posibnyk.* Lviv: Vyd-vo «SPOLOM», [in Ukrainian].

Kovalchuk, H. O., 1999. Formuvannia profesiinykh pedahohichnykh umin maibutnikh vykladachiv ekonomiky [Formation of professional pedagogical skills of future teachers of economics.]. *Pedahohika i psykholohiia [Pedagogy and psychology]*, 1, s. 98-103, [in Ukrainian].

Koshuk, O., 2017. Formuvannia profesiinoi kompetentnosti maibutnikh inzheneriv z mekhanizatsii silskoho hospodarstva: kontseptualnyi aspekt [Formation of professional competence of future agricultural mechanization engineers: conceptual aspect]. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPN Ukrainy. Profesiina pedahohika [The Scientific Journal of the Institute for Vocational Education of the NAES of Ukraine]*, 14, s. 51-60, [in Ukrainian].

Luzan, P.H., Pashchenko, T.M., Vanina, N.M. ta Kolisnyk, N.V., 2018. Standartyzatsiia profesiinoi osvity na osnovi kompetentnisnoho pidkhodu [Standardization of a professional education according to a competency principle]. *Science Rise*, 5 (25), s. 32-35, [in Ukrainian].

Nikohosian, L. R. ta Asieieva, Yu. O., 2017. Aksiolohichnyi pidkhid u systemi profesiino-pedahohichnoi pidhotovky maibutnikh fakhivtsiv medychnoi haluzi [Axiological approach in the system of professional and pedagogical training of future specialists in the medical field]. *Pedahohika [Pedagogy]*, [online] 4, s. 33-37. Dostupno: <http://dspace.pdpu.edu.ua/bitstream/123456789/802/1/>[Data zvernennia 25 Hruden 2019], [in Ukrainian].

Pashchenko, T. M., 2005. Samostiina robota yak zasib aktyvizatsii navchalno-piznavalnoi diialnosti studentiv[Independent work as a means of activating students' educational and cognitive activity]. V: Reformuvannia systemy ahrarnoi vyshchoi osvity v Ukraini: dosvid i perspektyvy *[Reforming the Agricultural Higher Education System in Ukraine: Experience and Prospects]*. Vseukrainska naukovo-praktychnoi konferentsiia. Kyiv, Ukraina, 21 Kviten 2005. Kyiv: NAU, [in Ukrainian].

Khutorskoi, A. V., 2003. Klyuchevyie kompetentsii: tehnologiya konstruirovaniya [Key competencies: design technology]. *Narodnoe obrazovanie [Public education]*, 5, s. 55-61, [in Russian].

Shukshunov, S. E., Vzyatyishev, V. F. i Romankova, L. I., 2011. *Innovatsionnoe obrazovanie: idei, printsipyi, modeli [Innovative education: ideas, principles, models]*. Moskva: MANVSh, [in Russian].

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Методологічні засади формування професійної компетентності майбутніх техніків-електриків в аграрних коледжах

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Реферат.

Актуальність: необхідність обґрунтування методологічних засад формування професійної компетентності майбутніх техніків-електриків визначається потребами в кваліфікованих спеціалістах для аграрної галузі.

Мета дослідження полягає в обґрунтуванні методологічних засад, конкретизації та висвітленні наукових підходів щодо формування професійної компетентності майбутніх техніків-електриків в аграрних коледжах.

Методи: теоретичні методи дослідження: аналіз психолого-педагогічної літератури з проблеми – для виявлення стану досліджуваної проблеми в педагогічній теорії та практиці; аналіз, синтез, абстрагування, узагальнення – для обґрунтування методологічних засад формування професійної компетентності майбутніх техніків-електриків.

Результати. У статті виокремлено низку методологічних підходів (системний, компетентнісний, гуманістичний, культурологічний, аксіологічний, особистісно-орієнтований, діяльнісно-розвивальний, середовищний, інформаційний, інтеграційний, технологічний, синергетичний), на які доцільно спиратися в процесі науково-теоретичного аналізу професійної компетентності майбутніх фахівців техніко-технологічних спеціальностей в аграрних коледжах. Розглянуто зміст і суть цих підходів, що дало змогу встановити основні вимоги до формування професійної компетентності майбутніх техніків-електриків та розуміння побудови навчального процесу у вищій школі для підготовки цих фахівців.

Висновки: методологічні засади формування професійної компетентності майбутніх техніків-електриків мають ґрунтуватися на єдності таких основних наукових підходів, як: компетентнісний, особистісно-орієнтований, діяльнісно-розвивальний, гуманістичний, культурологічний, аксіологічний, інформаційний, і, меншою мірою, на вимогах інтеграційного, технологічного й синергетичного підходів.

Ключові слова: *методологічний підхід, професійна компетентність, майбутній технік-електрик, аграрний коледж.*

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INSTITUTE OF VOCATIONAL EDUCATION AND TRAINING OF NAES OF UKRAINE

EXPANDING THE PROFESSIONAL PEDAGOGICAL PROFILE OF TEACHER FROM PROFESSIONAL (VOCATIONAL) EDUCATION SCHOOL UNDER THE CONDITIONS OF INCLUSION

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Abstract.

Relevance: persons with special educational needs require professional qualifications. This leads to the actualization of the issue of expanding the professional and pedagogical profile of the teacher of the P (V) E school and the inclusive competence acquisition.

Aim: to analyze the legal documents on the provision of inclusive education in the system of vocational education and training and study the needs of teachers of P(V)E school in the formation of inclusive competence.

Methods: theoretical (analysis, synthesis, generalization); empirical (interviewing methods, conversation).

Results: it has been found out that the problem of expanding the professional and pedagogical profile of the teacher of the professional (vocational) education school in the direction of his inclusive competence development needs to be addressed. It has been established that the creation of the barrier-free educational environment and the architectural accessibility of facilities in educational institutions for education applicants with special educational needs is necessary. The vast majority of teachers require the specially organized training on issues of inclusion introduction. It has been defined that teachers identify such forms of increasing the inclusive competence as training, specialist counseling and full-time targeted courses. The experience of forming the inclusive competence of teachers through the introduction of formal, non-formal and informal education has been presented. It has been stated that it is important to establish cooperation between educational institutions and regional inclusive resource centers. It has been proved that teachers need assistance in developing an individual curriculum for the education applicants with special educational needs and evaluation of its implementation.

Conclusions: the introduction of inclusive education in the system of vocational education and training will give the opportunity to obtain the working qualification for persons with disabilities, which will facilitate their personal and professional development; successful implementation of this task requires the expansion of the professional and pedagogical profile of the teacher of the professional (vocational) education school in the direction of inclusion, the creation of an inclusive educational environment, the introduction of appropriate pedagogical technologies, the development of training programs and their didactic support.

Keywords: *teacher of the professional (vocational) education school; professional development; professional and pedagogical profile; competence; inclusion.*

Introduction. At the present stage of development of the educational system, and, in particular, the professional (vocational) one, the basic principles of the Law of Ukraine "On Education" (2017) are: human-centrism, the rule of law, ensuring the quality of education and educational activity, the development of inclusive environment, humanism, democracy, accessibility for all citizens of all forms and types of educational services.

It should be noted that in Ukraine there are 167 thousand children with disabilities, representing 2% of the total population in this age category. At the same time, only 4% of children are enrolled in inclusive education, although disability should not be an obsta-

cle to personal and professional self-realization of the individual (Ministry of Social Policy of Ukraine, 2013).

Inclusive education is an integral part of the humanitarian policy of every modern country and a testament to society's willingness to realize the inalienable human rights to education and lifelong learning (Ministry of Social Policy of Ukraine, 2019). In connection with the introduction of inclusive education, the adoption of the Procedure for the organization of inclusive education in the professional (vocational) education schools, it is necessary to form the competence of teachers to teach persons with special educational needs (Verkhovna Rada of Ukraine. Legislation of Ukraine, 2019).

Therefore, it is urgent to expand the professional and pedagogical profile of the teacher of P(V)E school (Sysko, 2019) and acquire inclusive competence.

Sources of research. The Law of Ukraine "On Education" (2017) treats the concept of "competence" as "a dynamic combination of knowledge, skills, ways of thinking, attitudes, values and other personal qualities that determine the person's ability to socialize successfully, pursue a professional and/or further educational activity".

The term "inclusion" (translated from English – inclusion, integration) proclaims the idea of comprehensive integration of people with special educational needs into society.

The ideology of inclusion is aimed at providing every person with educational opportunities, including professional ones, directly in educational institutions, providing students with special educational needs, the access to qualitative learning in the common educational environment, their socialization and further employment.

The implementation of the ideology of inclusive education requires a certain strategy to create an inclusive society, improve educational structures, systems and teaching methods to meet the educational needs of the individual. In the inclusive environment, every individual, especially with special educational needs, should feel safe and have a sense of belonging to the team, society.

In Ukraine, the development of inclusive education is at an early stage. At present, the inclusion rate in Ukraine is only 7%, while in Italy – 99%, Lithuania – 90%, Norway --90%, Hungary – 57%, Slovakia – 42%, France – 25%. Therefore, there is a problem of speeding up the implementation of European standards in the education of our country.

The Law of Ukraine "On Education" (2017) defines inclusive education as "a prerequisite for equal access to education for all education applicants". In Ukraine, the "Procedure for the organizing the inclusive education in secondary schools" was approved in 2011. In 2018/2019 11,866 students with special educational needs were educated with inclusive classes (Ministry of Education and Science of Ukraine, 2019d).

In order to introduce inclusion in the process of obtaining professional qualifications and competences, in 2019 at the state level, the Cabinet of Ministers of Ukraine adopted a decree approving the "Procedure for organizing the inclusive education in professional (vocational) education school". It, objectively, determines the need for improvement of conditions of organization of the educational process, its content, methods, teaching aids and provision of appropriate training of teaching staff for the implementation of inclusive education for education applicants with special educational needs.

It should be noted that in Ukraine and, even in previous years, the provision of vocational education to persons with disabilities in different educational establishments of different levels was practiced, but these were isolated examples that did not become widespread and functioned without sufficient legal support for inclusion.

While solving the problem of inclusion at the state level, a number of normative-legal documents was adopted, namely: the Law of Ukraine "On Education" (2017), in particular Article 19 "Education of Persons with Special Educational Needs" and Article 20 "Inclusive Education"; Law of Ukraine "On Amendments to Certain Laws of Ukraine on Access to Educational Services for Persons with Special Educational Needs" (2018); a resolution of the Cabinet of Ministers of Ukraine "On Amendments to the Procedure for Organizing Inclusive Education in Secondary Schools" (2017); decree of the Cabinet of Ministers of Ukraine "On the National Strategy for Reforming the Institutional Care and Children Upbringing System for 2017-2026 and a Plan of Measures for the Implementation of its First Stage" (2017); Decree of the Cabinet of Ministers of Ukraine "On Approval of the Regulations on Inclusive Resource Center" (2017); resolution of the Cabinet of Ministers of Ukraine "On Approval of the Procedure for Organizing Inclusive Education in Professional (Vocational) Education School" (2019).

The purpose of the paper is to analyze the normative-legal acts on providing inclusive training in the system of professional (vocational) education and study the needs of teachers of P(V)E schools in forming inclusive competence.

Methods: analysis and synthesis – to find out the state and level of development of the studied problem; diagnostic (questionnaire, conversation) – to study the need for teachers to develop inclusive competence; generalization – to formulate conclusions and recommendations for developing the competence of teaching staff in inclusive education implementation.

Results and discussion. The Law of Ukraine "On Education" (2017) defines "inclusive learning" as "a system of state-guaranteed educational services based on the principles of non-discrimination, consideration of multilateral human activity, effective involvement and inclusion of all its participants in the educational process". The Law of Ukraine stipulates that "inclusive professional (vocational) education is a system of educational services for acquiring a profession or professional skills for persons with special educational needs guaranteed by the state" (Verkhovna Rada of Ukraine. Legislation of Ukraine, 2018). In order to exercise the rights of persons with special educational needs for qualitative vocational education, taking into account their opportunities and needs in Ukraine, a resolution of the Cabinet of Ministers of Ukraine "On Approval of the Procedure for Organizing Inclusive Training in professional (vocational) education schools" was adopted (Verkhovna Rada of Ukraine, Legislation of Ukraine, 2011).

At the same time, the legal framework is being expanded to provide and standardize inclusive education at the legislative level, in particular, letters of the Ministry of Education and Science of Ukraine № 1 / 9-498 dated 05.08.2019 "Methodological Recommendations for Organizing the Training of Persons with Special Educational Needs in Educational Institutions in 2019/2020 and No. 1/9-462 of 18/07/2019 "On Priority Areas of Psychological Service Work in the Education System for 2019/2020"

It should be noted that persons with special educational needs (who are not contraindicated in training in their chosen profession) are admitted to studying in professional (vocational) education schools. Teaching of students with special educational needs should take place using the types and forms of education that take into account their needs and individual abilities, personally oriented teaching methods.

In this regard, in order to organize the qualitative educational process for education applicants with special educational needs, an inclusive educational environment should be created in the P(V)E schools and psychological and pedagogical support of this category of students should be provided. The Law of Ukraine "On Education" (2017) emphasizes that "an inclusive educational environment in an educational institution is formed by a set of conditions, methods and means of their implementation for joint learning, education and development of the education applicants, taking into account their needs and opportunities".

The problem of the development of inclusive competence of teachers has been the subject of research by O. Kazachiner (2018), M. Chaikovskyi (2012); there are works devoted to inclusive education in the conditions of the vocational school (Pashchenko et al., 2011; Pashchenko, Hritsenok and Sofii, 2012), N. Sysko (2018). At the same time, there is currently insufficient scientific research on the formation of inclusive competence among teachers of the system of professional (vocational) education.

It should be emphasized that in order to implement a qualitative inclusive learning in the professional (vocational) education schools, a barrier-free educational environment should be created and the architectural accessibility of the institution should be ensured. The interaction between the members of the team of psychological and pedagogical support should be well-organized and the competence of the teachers for the implementation of the differentiated approach to the educational problem development, assessments and quality control of knowledge of students with special educational needs should be formed.

In this context, the National Report on the State and Prospects for the Development of Education of Ukraine emphasizes the "need to increase the professional level of teaching staff by providing qualitatively new professional training and retraining, taking into account modern approaches and technologies of training and support of persons with special needs' (Kremen, 2016).

In order to study the state of inclusive education implementation in professional (vocational) education schools and the need to develop inclusive competence of pedagogical workers, an anonymous survey was conducted, which involved 90 teachers of P(V)E schools in Ukraine.

The majority of the participants of the research, assessing the state of creation of the barrier-free educational environment and the architectural accessibility of the placement in the educational institution (where they carry out pedagogical activity), noted that it needed improvement. Only 3.33% of teachers said that the whole territory and placement of the institution were accessible to students with special educational needs (hereinafter – students with SEN).

It turned out that 15.5% of teachers did not understand the essence of the concept of "inclusive learning", considering it to be the education of students with SEN in specialized educational institutions or specialized groups. 22.2% of the survey participants are not familiar with the approval "Procedure for organizing the inclusive education in professional (vocational) education schools", which indicates that teachers are not sufficiently informed and aware of this problem. And although 42.2% of the teachers of professional (vocational) education schools had some practical experience in teaching students with SEN, The analysis of the results of the questionnaire makes it possible to conclude that teachers need inclusive competence formation.

Regarding the inclusive teaching methodology, only 33.3% of teachers indicate that they use a personal-oriented teaching method for students with SEN; 25,6% – the method of differentiated approach to the development of educational programs, assessment and quality control of knowledge of students with SEN; 17,8% – the method of development of the individual curriculum for the education applicant with SEN; 44,4% – the method of organizing the individual consultations for students with SEN; 58.9% of teachers use methods of interaction with parents of the student with SEN.

The vast majority of teachers (86.7%) require specially organized training on the implementation of inclusion in P(V)E schools.

The results of the research of the teachers of P(V)E schools on the forms of inclusive competence development are presented in *Table 1*.

Therefore, the teachers have identified trainings, consultations and full-time targeted courses as the most appropriate forms of inclusive competence enhancement.

With the aim of forming the inclusive competence of teachers of P(V)E schools within the framework of formal education at the advanced training courses held by the Scientific and Methodological Center of Vocational Education and Training of Engineering Pedagogical Workers in Khmelnitsky region, the issue of providing inclusive education of P(V)E schools was introduced into the subject area.

At the level of non-formal education, training seminars, seminars-trainings, professional consultations with the staff of the regional resource center on support of inclusive education and regional inclusive-resource centers are held. Also, teachers of P(V)E schools as members of the team of psychological and pedagogical support of organizing the inclusive training, receive methodical assistance on the organization of educational process in the educational institution and training the education applicants with special educational needs in the Scientific and Methodological Center of Vocational Education and Advanced Training of Engineering and Pedagogical Workers in Khmelnytsky Oblast.

The "Inclusive Learning" section has been created at the Information Portal "Vocational Education of Khmelnytsky Region", which is saturated with regulatory and scientific and methodological materials. It allows to move quickly to the inclusive section of the site of the Ministry of Education and Science of Ukraine, the site of the Khmelnytsky Regional Resource Center for Support of Inclusive Education.

It is worth to note that the acquisition and improvement of the competence of teachers in the provision of inclusive education will be facilitated by the well-established cooperation between the P(V)E schools and the Inclusive Resource Center (IRC), an institution established to exercise the rights of children with special educational needs from the age of 2 to 18 for obtaining education, including professional (vocational) one, by conducting a comprehensive psychological and pedagogical assessment of the child's development, providing psychological and pedagogical, correctional and developmental services and ensuring their systematic qualified support (Verkhovna Rada of Ukraine. Legislation of Ukraine, 2017).

By April 2019, 557 inclusive resource centers have been registered in Ukraine (MES of Ukraine website). A number of tasks performed by these institutions are to provide advice and interaction with the teaching staff of P(V)E schools on issues of inclusive education organization.

At the same time, teachers need assistance in issues of developing an individual curriculum for the education applicant with special educational needs and evaluation of its implementation.

It is necessary to resolve the issue of introducing a teaching assistant to the staff, who is involved in the development and implementation of the individual curriculum for the student with SEN, and also provides adaptation of educational materials taking into account the individual characteristics of educational and cognitive activity of the education applicant.

Conclusions. The introduction of inclusive ed-

Table 1

Results of the survey of the teachers of P(V)E schools on forms of inclusive competence development

№	Form of education	Number of teachers who determined its expediency (%)	Rank
1.	Full-time Targeted Courses	43,3	3
2.	Distance courses	31,1	5
3.	Lectures, seminars	36,7	4
4.	Trainings	57,8	1
5.	Counseling	52,2	2
6.	Round Table Meeting	18,9	6

ucation in the system of professional (vocational) education will provide an opportunity to obtain working qualifications for persons with disabilities, find a job and integrate themselves fully into public life. Successful accomplishment of this task requires the expansion of the professional and pedagogical profile of the teacher of P(V)E schools in the direction of inclusion, creation of the inclusive educational environment, introduction of appropriate pedagogical technologies, development of training programs and their didactic support.

List of references

Верховна Рада України. Законодавство України, 2011. *Порядок організації інклюзивного навчання у загальноосвітніх навчальних закладах.* [online] (Останнє оновлення 09 Серпень 2017) Доступно: <https://zakon.rada.gov.ua/laws/show/872-2011-%D0%BF> [Дата звернення 15 Жовтень 2019].

Верховна Рада України. Законодавство України, 2017. *Положення про інклюзивно-ресурсний центр.* [online] (Останнє оновлення 22 Серпень 2018) Доступно:<https://zakon.rada.gov.ua/laws/show/545-2017-%D0%BF> [Дата звернення 19 Вересень 2019].

Верховна Рада України. Законодавство України, 2018. *Закон України «Про внесення змін до деяких законів України щодо доступу осіб з особливими освітніми потребами до освітніх послуг» від 6 вересня 2018 року № 2541-VIII.* [online] (Останнє оновлення 06 Вересень 2018) Доступно: <https://zakon.rada.gov.ua/laws/show/2541-19> [Дата звернення 25 Березень 2019].

Верховна Рада України. Законодавство України, 2019. *Порядок організації інклюзивного навчання у закладах професійної (професійно-технічної) освіти.* [online] (Останнє оновлення 25 Липень 2019) Доступно: <https://zakon.rada.gov.ua/laws/show/636-2019-%D0%BF > [Дата звернення 15 Жовтень 2019].

Казачінер, О.С., 2018 *Теоретичні і методичні засади розвитку інклюзивної компетентності вчителів філологічних дисциплін у системі післядипломної освіти.* Доктор наук. Хмельницький національний університет.

Кремень, В.Г. ред., 2016. Освіта дітей з особливими освітніми потребами. *Національна доповідь про стан і перспективи розвитку освіти в Україні*. Київ: Педагогічна думка, с. 68-76.

Міністерство освіти і науки України, 2019. *Інклюзивне навчання*. [online] (Останнє оновлення 06 Жовтень 2019) Доступно: <http://profosvitakm.at.ua/index/inkljuzivne_navchannja/0-195> [Дата звернення 11 Жовтень 2019].

Міністерство освіти і науки України, 2019. *Методичні рекомендації щодо організації навчання осіб з особливими освітніми потребами в закладах освіти в 2019/2020 н.р.* [online] (Останнє оновлення 08 Серпень 2019) Доступно: <https://mon.gov.ua/storage/app/media/inkluzyvne-navchannya/2019/08/07/rekomendatsiiorganizatsiya-navchannyaoop.pdf> [Дата звернення 8 Серпень 2019].

Міністерство освіти і науки України, 2019. *Про пріоритетні напрями роботи психологічної служби у системи освіти на 2019/2020 н.р.* [online] (Останнє оновлення 18 Липень 2019) Доступно: <https://mon.gov.ua/ua/npa/pro-prioritetni-napryami-roboti-psihologichnoyi-sluzhbi-u-sistemi-osviti-na-20192020-navchalnomu-roci> [Дата звернення 14 Серпень 2019].

Міністерство освіти і науки України, 2019. *Статистичні дані.* [online] (Останнє оновлення 18 Липень 2019) Доступно: <https://mon.gov.ua/storage/app/media/inkluzyvne-navchannya/statistika-inklyuziya.pdf>[Дата звернення 17 Жовтень 2019].

Міністерство соціальної політики України, 2013. Про становище осіб з інвалідністю в Україні. Національна доповідь. [online], с. 7. (Останнє оновлення 18 Липень 2019) Доступно: file:///C:/Users/Volod/Downloads/REP0000749.PDF [Дата звернення 17 Жовтень 2019].

Міністерство соціальної політики України, 2019. Перша доповідь України про стан виконання Конвенції ООН про права осіб з інвалідністю. [online] (Останнє оновлення 29 Травень 2019) Доступно: https://www.msp.gov.ua/timeline/Realizaciya-norm-Konvencii-pro-prava-osib-z-invalidnistyu.html [Дата звернення 17 Жовтень 2019].

Пащенко, О.В., Гриценок, І.А. та Софій, Н.З., 2012. *Інклюзивна освіта в умовах професійно-технічного навчального закладу.* Київ: АртЕкономі.

Пащенко, О.В., Гриценок, І.А., Софій, Н.З. та Найда, Ю.М., 2011. *Індекс інклюзії:* професійно-технічний навчальний заклад. Київ: ТОВ «Видавничий дім «Плеяди»». [online] Доступно: <http://elibrary.kubg.edu.ua/id/eprint/5588/1/Y_Naida_IIPTNZ.pdf> [Дата звернення 12 Жовтень 2019].

Сиско, Н.М, 2018, Інклюзія в системі професійної (професійно-технічної) освіти. *Професійна освіта: науково-методичний вісник*, 1-2 (50-51), с. 64-71.

Сиско, Н.М., 2019. Проєктування професійно-педагогічного профілю викладача закладу професійної (професійно-технічної) освіти. Н*аукові записки Тернопільського національного педагогічного університету імені Володимира Гнатюка*, 1, с.117-122.

Чайковський, М., 2012. Інклюзивна компетентність як складова компетентності суб'єктів навчально-виховного процесу. *Педагогіка і психологія професійної освіти,* [online] 2, с. 15-21. Доступно: <http://ena.lp.edu.ua/bitstream/ntb/23642/1/4-15-21.pdf> [Дата звернення 12 Жовтень 2019].

Bazyl, L. O., Shatkovska, H. I., Klymenko, M. M., and Radkevych, V. O., 2019. Psychological and pedagogical features of the career growth of vocational education's teachers. *Opcion,* 35 (Special Issue 23), 763-779.

Translated & Transliterated

Verkhovna Rada Ukrainy. Zakonodavstvo Ukrainy [Verkhovna Rada of Ukraine. Legislation of Ukraine], 2011. P*oriadok orhanizatsii inkliuzyvnoho navchannia u zahalnoosvitnikh navchalnykh zakladakh [Procedure for organizing the inclusive education in secondary schools.]*. [online] (Ostannie onovlennia 09 Serpen 2017) Dostupno: <https://zakon.rada.gov.ua/laws/show/872-2011-%D0%BF> [Data zvernennia 15 Zhovten 2019].

Verkhovna Rada Ukrainy. Zakonodavstvo Ukrainy [Verkhovna Rada of Ukraine. Legislation of Ukraine], 2017. *Polozhennia pro inkliuzyvno-resursnyi tsentr [Regulations on Inclusive Resource Center]*. [online] (Ostannie onovlennia 22 Serpen 2018) Dostupno:<https://zakon.rada.gov.ua/laws/show/545-2017-%D0%BF> [Data zvernennia 19 Veresen 2019].

Verkhovna Rada Ukrainy. Zakonodavstvo Ukrainy [Verkhovna Rada of Ukraine. Legislation of Ukraine], 2018. *Zakon Ukrainy «Pro vnesennia zmin do deiakykh zakoniv Ukrainy shchodo dostupu osib z osoblyvymy osvitnimy potrebamy do osvitnikh posluh» vid 6 veresnia 2018 roku № 2541-VIII [Law of Ukraine «On Amendments to Certain Laws of Ukraine on Access to Educational Services for Persons with Special Educational Needs» of September 6, 2018 No. 2541-VIII.]*. [online] (Ostannie onovlennia 06 Veresen 2018) Dostupno: <https://zakon.rada.gov.ua/laws/show/2541-19> [Data zvernennia 25 Berezen 2019].

Verkhovna Rada Ukrainy. Zakonodavstvo Ukrainy [Verkhovna Rada of Ukraine. Legislation of Ukraine], 2019. *Poriadok orhanizatsii inkliuzyvnoho navchannia u zakladakh profesiinoi (profesiino-tekhnichnoi) osvity [Procedure for organizing the inclusive education in professional (vocational) education schools]*. [online] (Ostannie onovlennia 25 Lypen 2019) Dostupno: <https://zakon.rada.gov.ua/laws/show/636-2019-%D0%BF > [Data zvernennia 15 Zhovten 2019].

Kazachiner, O.S., 2018 *Teoretychni i metodychni zasady rozvytku inkliuzyvnoi kompetentnosti vchyteliv filolohichnykh dystsyplin u systemi pisliadyplomnoi osvity [Theoretical and methodological foundations of the development of inclusive competence of teachers of philological disciplines in the system of postgraduate education]*. Doktor nauk. Khmelnytskyi natsionalnyi universytet.

Kremen, V.H. red., 2016. *Osvita ditei z osoblyvymy osvitnimy potrebamy. Natsionalna dopovid pro stan i perspektyvy rozvytku osvity v Ukraini [National report on the state and prospects of education development in Ukraine]*. Kyiv: Pedahohichna dumka, s. 68-76.

Ministerstvo osvity i nauky nauky Ukrainy [Ministry of Education and Science of Ukraine], 2019a. *Inkliuzyvne navchannia [Inclusive Education]*. [online] (Ostannie onovlennia 06 Zhovten 2019) Dostupno: <http://profosvitakm.at.ua/index/inkljuzivne_navchannja/0-195> [Data zvernennia 11 Zhovten 2019].

Ministerstvo osvity i nauky Ukrainy [Ministry of Education and Science of Ukraine], 2019b. *Metodychni rekomendatsii shchodo orhanizatsii navchannia osib z osoblyvymy osvitnimy potrebamy v zakladakh osvity v 2019/2020 n.r. [Methodical recommendations for the organization of training of persons with special educational needs in educational institutions in 2019/2020]*. [online] (Ostannie onovlennia 08 Serpen 2019) Dostupno: <https://mon.gov.ua/storage/app/media/inkluzyvne-navchannya/2019/08/07/rekomendatsiiorganizatsiya-navchannyaoop.pdf> [Data zvernennia 8 Serpen 2019].

Ministerstvo osvity i nauky Ukrainy [Ministry of Education and Science of Ukraine], 2019c. *Pro priorytetni napriamy roboty psykholohichnoi sluzhby u systemy osvity na 2019/2020 n.r. [About priority directions of work of psychological service in educational systems for 2019/2020].*[online] (Ostannie onovlennia 18 Lypen 2019) Dostupno: <https://mon.gov.ua/ua/npa/pro-prioritetni-napryami-roboti-psihologichnoyi-sluzhbi-u-sistemi-osviti-na-20192020-navchalnomu-roci> [Data zvernennia 14 Serpen 2019].

Ministerstvo osvity i nauky Ukrainy [Ministry of Education and Science of Ukraine], 2019d. *Statystychni dani [Statistical data]*. [online] (Ostannie onovlennia 18 Lypen 2019) Dostupno: <https://mon.gov.ua/storage/app/media/inkluzyvne-navchannya/statistika-inklyuziya.pdf>[Data zvernennia 17 Zhovten 2019].

Ministerstvo sotsialnoi polityky Ukrainy *[Ministry of Social Policy of Ukraine]*, 2013. Pro stanovyshche osib z invalidnistiu v Ukraini. Natsionalna dopovid [On the situation of persons with disabilities in Ukraine. National report]. [online], s. 7. (Ostannie onovlennia 18 Lypen 2019) Dostupno: file:///C:/Users/Volod/Downloads/REP0000749.PDF [Data zvernennia 17 Zhovten 2019].

Ministerstvo sotsialnoi polityky Ukrainy *[Ministry of Social Policy of Ukraine]*, 2019. Persha dopovid Ukrainy pro stan vykonannia Konventsii OON pro prava osib z invalidnistiu *[The first report of Ukraine on the state of implementation of the UN Convention on the Rights of Persons with Disabilities]*. [online] (Ostannie onovlennia 29 Traven 2019) Dostupno: https://www.msp.gov.ua/timeline/Realizaciya-norm-Konvencii-pro-prava-osib-z-invalidnistyu.html [Data zvernennia 17 Zhovten 2019].

Pashchenko, O.V., Hrytsenok, I. A. ta Sofii, N. Z., 2012. *Inkliuzyvna osvita v umovakh profesiino-tekhnichnoho navchalnoho zakladu [Inclusive education in the conditions of vocational education and training institution]*. Kyiv: ArtEkonomi.

Pashchenko, O.V., Hrytsenok, I.A., Sofii, N.Z. ta Naida, Yu.M., 2011. *Indeks inkliuzii: profesiino-tekhnichnyi navchalnyi zaklad [Inclusion index: vocational education and training institution]*. Kyiv: TOV «Vydavnychyi dim «Pleiady»». [online] Dostupno: <http://elibrary.kubg.edu.ua/id/eprint/5588/1/Y_Naida_IIPTNZ.pdf> [Data zvernennia 12 Zhovten 2019].

Sysko, N.M, 2018, Inkliuziia v systemi profesiinoi (profesiino-tekhnichnoi) osvity *[Inclusion in Vocational Education.]. Profesiina osvita: naukovo-metodychnyi visnyk [Professional Education: Scientific and Methodological Bulletin]*, 1-2 (50-51), s. 64-71.

Sysko, N.M., 2019. Proiektuvannia profesiino-pedahohichnoho profiliu vykladacha zakladu profesiinoi (profesiino-tekhnichnoi) osvity *[Designing of the professional-pedagogical profile of the teacher of theprofessional (vocational) education school]. Naukovi zapysky Ternopilskoho natsionalnoho pedahohichnoho universytetu imeni Volodymyra Hnatiuka [Scientific Notes of the Ternopil National Pedagogical University named after Volodymyr Hnatyuk],* 1, s. 117-122.

Chaikovskyi, M., 2012. Inkliuzyvna kompetentnist yak skladova kompetentnosti subiektiv navchalno-vykhovnoho protsesu *[Inclusive competence as a component of the competence of subjects of educational process.]. Pedahohika i psykholohiia profesiinoi osvity [Pedagogy and Psychology of Vocational Education],* [online] 2, c. 15-21 Dostupno: <http://ena.lp.edu.ua/bitstream/ntb/23642/1/4-15-21.pdf> [Data zvernennia 12 Zhovten 2019].

Bazyl, L. O., Shatkovska, H. I., Klymenko, M. M., and Radkevych, V. O., 2019. Psychological and pedagogical features of the career growth of vocational education's teachers. *Opcion*, 35 (Special Issue 23), 763-779, [in English].

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Розширення професійно-педагогічного профілю викладача закладу професійної (професійно-технічної) освіти в умовах інклюзії

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Реферат.

*Актуальні*сть: особи з особливими освітніми потребами потребують здобуття професійних кваліфікацій. Це зумовлює актуалізацію питання розширення професійно-педагогічного профілю викладача ЗП(ПТ)О, набуття ним інклюзивної компетентності.

Мета: аналіз нормативно-правових документів щодо забезпечення інклюзивного навчання в системі професійної (професійно-технічної) освіти та дослідження потреби викладачів ЗП(ПТ)О у формуванні інклюзивної компетентності.

Методи: теоретичні (аналіз, синтез, узагальнення); емпіричні (анкетування, бесіда).

Результати: з'ясовано, що потребує вирішення проблема розширення професійно-педагогічного профілю викладача закладу професійної (професійно-технічної) освіти в напрямі розвитку його інклюзивної компетентності. Встановлено, що необхідним є створення безбар'єрного освітнього середовища та архітектурної доступності приміщень у закладі освіти для здобувачів освіти з особливими освітніми потребами. Переважна більшість викладачів потребує спеціально організованого навчання з питань запровадження інклюзії. Визначено, що викладачі виділяють такі форми підвищення інклюзивної компетентності, як: тренінги, консультування у фахівців та очні цільові курси. Представлено досвід формування інклюзивної компетентності педагогів шляхом упровадження формальної, неформальної та інформальної освіти. Констатовано, що важливим є налагодження співпраці між закладами освіти та регіональними інклюзивно-ресурсними центрами. Встановлено, що викладачі потребують допомоги в питаннях розробки індивідуального навчального плану здобувача освіти з особливими освітніми потребами та оцінки його виконання.

Висновки: запровадження інклюзивного навчання у системі професійної (професійно-технічної) освіти дасть змогу здобути робітничу кваліфікацію особам з інвалідністю, що сприятиме їхньому особистісному і професійному розвитку; успішна реалізація цього завдання потребує розширення професійно-педагогічного профілю викладачів ЗП(ПТ)О в напрямі інклюзії, створення інклюзивного освітнього середовища, запровадження відповідних педагогічних технологій, розроблення навчальних програм та їх дидактичного забезпечення.

Ключові слова: *викладач закладу професійної (професійно-технічної) освіти; професійний розвиток; професійно-педагогічний профіль; компетентність; інклюзія.*

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PROFESSIONAL TRAINING OF FUTURE SKILLED WORKERS IN PROFESSIONAL (VOCATIONAL) EDUCATION SCHOOLS BASED ON MODULAR ÀND COMPETENCE APPROACH

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Abstract

Relevance: in order to implement the effective personal self-realization of the future skilled worker, there is a need for the system of professional (vocational) education to follow the changes in the sphere of work, respond to the economic situation in the country, the structure of the market of professions, the demand for new competences. All this requires a significant increase in the degree of flexibility of this education system, creation of fundamentally new forms of its interaction with the labor market, employers (social partners) and their active participation in its further and future development.

Purpose: to carry out theoretical and methodological substantiation of the system of professional training of future skilled workers in the professional (vocational) education schools on the basis of modular competence approach.

Methods: theoretical analysis, study of regulatory documents, analysis of curricula – to find out the state of development of the problem and determine the directions of research; comparison – to study different scientific perspectives on the problem; analysis and synthesis – to develop criteria and indicators of the readiness of future skilled workers to carry out professional activities on a modular basis; systematization and generalization – to formulate conclusions.

Results: the essential characteristics of module competence training are revealed, its peculiarities and main aspects are characterized, which create the proper conditions for the formation of key competences and successful training of future skilled workers, the development of their creative cognitive activity and independence in terms of modular mastery of professional activity.

Conclusions: in the implemented professional training of future skilled workers, based on modular competence, there is a complex development of skills and knowledge within the framework of formation of the specific competence of the individual, which ensures the fulfillment of the specific labor function and reflects the requirements of the modern labor market.

Keywords: *competence, module, modular competence approach, module technology, vocational education.*

Introduction. The gradual entry of the Ukrainian economy into market mechanisms makes it clear that graduates of institutions of professional (vocational) education, without sufficient professional qualification and experience of practical activity, have particular difficulties in adapting to the labor market. In the conditions of dynamism of market relations, vocational training can not guarantee a graduate a job (not only throughout his life, but also in the near future). A large number of young people have to re-study, that is, to acquire a new profession. Today, effective personal self-realization requires not only professional, but also social, economic, communicative competences that accompany, virtually, all types of professional activity. The consequence of these changes is the need for the system of professional (vocational) education to follow the changes in the sphere of work, respond to the economic situation in the country, the

structure of the market of professions, and the demand for new competences. All this requires a significant increase in the degree of flexibility of this education system, creation of fundamentally new forms of its interaction with the labor market, employers (social partners), their active participation in its further and future development.

Sources of research. Considerable attention is given to the professional training of future skilled workers, and, in particular, its modular competence basis, in the works of numerous Ukrainian (E. Kachan, S. Kravets, N. Kulalaieva, V. Radkevich, etc.) and foreign (I. Zimnyaya, Y. Konovalova, G. Selevko, N. Yusufbekova, etc.) scientists. The modular competence approach used in the training of skilled workers in the construction and machine building industries is relevant today (P. Luzan, M. Mykhniuk, G. Lukianenko, T. Piatnychuk, V. Yahupov, etc.).

However, despite the increased efforts of scientists to study the individual elements of the modular competence framework of professional training of future skilled workers, a comprehensive study (that would meet the requirements of today) has not been properly carried out.

Research methods: theoretical analysis, study of normative documents, analysis of training programs – in order to find out the current state of development of the identified problem and determine the directions of study of professional training of future skilled workers on the modular basis; comparison – to study the diverse scientific perspectives on the problem of this training; analysis and synthesis – to justify the components of the system of professional activity of future skilled workers on the modular basis; systematization and generalization – to formulate scientific conclusions of the problem study.

The purpose of the paper is to carry out theoretical and methodological substantiation of the system of professional training of future skilled workers in the professional (vocational) education schools on the basis of modular competence approach.

Results and discussion. The modernization of production puts forward new demands on skilled workers with vocational education. Increasing the share of work, associated with the implementation and maintenance of new technologies, requires not only practice-oriented and appropriate knowledge of new equipment, tools, but conditions of technological process implementation. Businesses are more interested in saturating all branches of production with workforce with creative capabilities, analytical skills, a tendency to find something new in their field of activity, initiative and social responsibility for the results of work. As a matter of fact, as I. Zimnyaya (2004) notes, it is about strategic personnel policy, in which the necessity of constant updating of knowledge and development of new professions and specialties by future skilled workers are put forward as the basic principles of labor activity.

These are the most pressing issues for the system of professional (vocational) education, as today one of the most "mutually beneficial" areas of interaction between production and education is the participation of employers in the development of contents of dual education (according to sociological studies, more than 80% of employers are ready for this work). If the participation of employers in the development of the contents of this education provides training in accordance with the tasks of technical modernization and development of the enterprise, improving labor productivity and quality of products, a number of requests of specific production allows professional (vocational) education to prepare competitive professionals in demand in regional labor markets (Luzan et al., 2015).

Therefore, in the conditions of modernization of such production there is an urgent need to use graduates of professional (vocational) educational institutions in particularly difficult working professions, since the management of high-tech automated systems for the production of complex high-precision and expensive products is becoming the main professional function of modern skilled workers.

The concept of "competence" is defined in the existing standards of professional (vocational) education as the ability to apply knowledge, skills and personal qualities for successful activity in the particular field. It is the level of conformity of individual indicators (learning outcomes) that is the main indicator of competence for the employer and society. The essence of the competence approach is that in the process of education a person must form and possess a complete social and professional quality, which allows him to solve industrial problems successfully and interact with other people. Thus, competence is the most adequate to describe the results of professional (vocational) education, which underpin the needs of the modern labor market (Yahupov, 2014).

A competence-based approach to learning is understood as a system of educational construction that aims to form certain key competencies of the student. In professional education, it is a model of organizing such a process, in which the purpose of learning is a set of key competences of students, and as a means of achieving it – the modular construction of the structure and contents of vocational training. It is a requirement of the standard of professional (vocational) education, as the basis of such a standard of the third generation is a modular-disciplinary approach. From this definition it follows that the modular competence

approach envisages the organization of the training and production process, the purpose of which is the formation of specific competences of future skilled workers, and the contents of this process is structured in the form of models (Luzan, 2012).

Modular construction of such standards has advantages, in particular:

– flexibility (if necessary, it is possible to update or replace specific modules based on the requirements of graduate training);

– the ability to combine the necessary modules and their individual units to individualize learning;

– changes in the assessment procedure – demonstration of the acquired knowledge and skills in the specific module (mastery of competence).

Within the modules there is also a comprehensive development of theoretical and practical aspects of each type of professional activity. At the same time, the contents of theoretical disciplines is reviewed for the redistribution of the amount of necessary theoretical knowledge, which will be the basis for the formation of professional competence, while the "elimination" of superfluous theory will occur (Pankov, 2003).

The training module (represented by the logical completed part of the training material, a certain unit of study) is relatively independent and holistic, having:

– contents in the form of the logically completed block(s) that combine several topics;

– its own learning objectives, the holistic set of which is to be mastered, the ability, knowledge, attitudes and experience (competencies), described in the form of requirements, which must be met by the student of the professional (vocational) educational institution upon completion of the module, and is an integral part of the more general professional function;

– technological and methodological "equipment" that provides the educational process;

– organizational forms of training necessary for its successful implementation;

– control.

The construction of the training module includes the following steps:

– definition of competences that are formed in the process of specific study of the module;

– selection of educational elements of the module – definition of contents, establishment of internal and intersubject links, compilation of supporting notes, diagrams, electronic textbooks;

– defining the tasks of the module element, its key competences;

– design of the didactic process (development of the system of training tasks, materials for practical classes, compiled under the level of knowledge, skills, competences, selection of appropriate techniques for their mastering);

– development of extracurricular independent activity (implementation of tasks according to the algorithm, different-level differentiated problems of problematic nature);

– general element – conclusions, main results;

– development of the system of current and intermediate control of different levels with the freedom of choice and use of the rating system.

The implementation of the module competence approach also involves the development of: module programs that reflect the basic requirements for interdisciplinary courses and planned professional activity; educational and methodological materials that integrate theoretical and practical training in their structure; a system of internal and external controls for assessing the quality of training applied in accordance with the relevant principles and mechanisms. Each module should reflect the planned learning outcomes, its contents (performance and assessment criteria), teaching methods. The limits of the module in its development are determined by a set of theoretical knowledge and practical skills that the student must demonstrate after completing the study module. Competence criteria can be divided into two groups – objective and subjective (external and internal). The procedural features of the activity (pace, speed, intensity, amount) are the objective parameters of the assessment of competence manifestation; a variety of techniques and actions when performing the proposed tasks; efficient indicators of activity– the level and quality of results. Subjective criteria include substantive characteristics of the activity (internal motivations, attitudes, motives of behavior); degree of expressiveness of motives, needs of activity, etc.

Thus, the leading concept of competence approach today is an "educational module", while competence (in one or another professional field) is a set of such modules, and each of them is formed as a specific function (aspect) of future professional activity of the skilled worker. Therefore, in vocational education the competence approach is transformed into modular competence. Under the conditions of modular competence approach within the separate module (being as a unit of education standard for the specialty or educational program of an educational institution), the complex development of skills and knowledge is carried out within the framework of competence formation, which ensures the fulfillment of the specific labor function, taking into account the requirements of the labor market (Luzan et al. , 2015).

Activities on the development of professional programs based on the modular competence approach, possess the necessary logics, consistency, transpar-

ency, provide continuity with the national didactic tradition, which is well known and widely used in the world practice. These activities have taken place for more than ten years. They are a set of documents that reflect the contents of vocational education and consist of a set of modules aimed at mastering certain key competences needed for achievement of qualification in profession or specialty (Kulalaieva and Herliand, 2018).

In the modular competence approach, the implementation of the educational program foresees:

– introduction of new educational technologies and principles of organization of educational and production process, ensuring effective implementation of new models and contents of vocational education, including using modern information and communication technologies;

– use of interactive forms of conducting classes (seminars in dialog mode, discussions, computer simulations, business and role-playing games, analysis of specific situations, psychological trainings, etc.) in combination with extra-curricular work in order to form and develop students' professional skills;

– organizing meetings with representatives of companies, state and non-governmental organizations, workshops of experts and specialists within the curriculum;

– within the educational process – creation of conditions for students to develop experience of independent decision of cognitive, communicative, organizational, moral and other problems (Yahupov, 2014).

The modular competence approach allows to implement the integration of theoretical and practical learning, rethink the place and role of theoretical knowledge in the process of mastering key competences. The advantage of competence-based modular programs is that their flexibility allows to update or replace individual specific modules when changing specialist requirements, (thereby ensuring the quality of their training at a competitive level). These programs also give an opportunity to individualize training by combining modules. Using a module competence approach to specialist training allows the institution to become the owner of the training intellectual resource. The advantage of these programs for the educational institution is that their tasks meet the needs of employers, real preparation of students for work, contribute to the growth of trust of social partners, the formation of industrial culture in the educational institution, the creation of standard, objective, independent conditions for quality assessment, development of training programs (Herliand et al., 2019).

The technology of implementation of the module competence approach in professional (vocational) education is carried out in stages: at the first stage the development of the modular program (reflecting the basic requirements and the planned professional activity of student); the second stage is the development of teaching and methodological materials for students, teachers, vocational instructors based on the structure of the module and the proposed level of competence; at the third stage – the development of the system of quality assessment of training, taking into account the relevant principles and mechanisms *(Fig. 1)*.

Consequently, the conceptual basis of modular learning is the theory of personality and motivation; activity and its subject; activity, cognitive activity and creativity; gradual formation of mental actions. The aim of the modular competence approach is to create the right conditions for the formation of key competences and learning success, the development of creative cognitive activity and independence of students. The main idea of this approach is to create the right conditions for achieving high and continuous learning outcomes of students as well as developing their creative potential. Such conditions are modular organization of the educational process, constant monitoring of the level of achievements and evaluation of success. We believe that the modular competence approach, provided that it is properly applied, can be a means of forming the key competences of future skilled workers because of its essential features: modularity, competence, rating. These traits create opportunities for competence formation, since the main focus is on the formation of students' ability to learn on their own, self-acquire knowledge, skills and build on skills – categories within the concept of "competence". Individualization of training solves the urgent task – training specialists who are able to adapt quickly to changes in production, make the right and quick decisions and solve the tasks. The

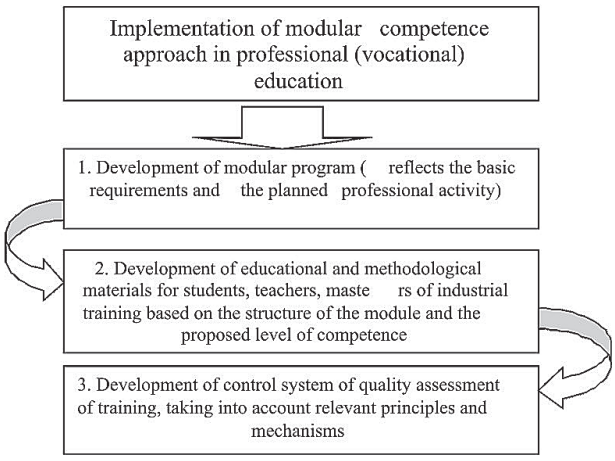

Fig. 1. Technology of implementation of modular competence approach in professional (vocational) education) (designed by O. Oleinikova)

cooperation of educational institutions with employers in assessing the level of formation, for a example, of the professional competence of the future specialist and determining the requirements for his specific production, is the most in-demand. Students can try their professional skills in different areas of work, which promotes the acquisition of practical competences and increases the competitiveness of graduates (Oleinikova, 2010).

Conclusions. Thus, in professional (vocational) education, the competence approach is transformed into the modular competence, in which (within a single module) a complex development of skills and competences (within the framework of the formation of the specific competence of the individual) is carried out. This specific competence of the individual ensures the fulfillment of the specific labour function and reflects the requirements of the modern labor market. To sum up, it can be noted that the important peculiarity of the modular competence approach is the detailed-planned, diagnostically determined goal of education (training) to develop criteria for assessing the quality of the given educational results. This is especially noticeable in dual training.

List of references

Зимняя, И. А., 2004. *Ключевые компетенции как результативно-целевая основа компетентностного подхода в образовании:* авторская версия. Москва: Исследовательский центр проблем качества подготовки специалистов.

Герлянд, Т. М, Дрозіч, І. А., Кулалаєва, Н. В., Романова, Г. М. та Шимановський, М. М., 2019. *Організація дуальної форми навчання у закладах професійної (професійно-технічної): практичний посібник.* Житомир: Полісся.

Кравець, С. Г., Кравець, Ю. І., Дерев'янко, Н. П. та Оліферчук, О. Г., 2014. *Педагогічні основи формування змісту підготовки кваліфікованих робітників за інтегрованими професіями: посібник.* Київ: Поліграфсервіс.

Кулалаєва, Н. В. та Герлянд, Т. М., 2018. Дуальна форма навчання – запорука якісної підготовки сучасного кваліфікованого робітника. *Професійно-технічна освіта,* 4, с. 40.

Лузан, П. Г., 2012. Реалізація компетентнісного підходу в професійній освіті: технологічний аспект. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка*: зб. наук. праць. / Інст-т проф.-тех. освіти НАПН України, 4, с. 5-11.

Лузан, П. Г., Ягупов, В. В., Лук'яненко, Г. І., Пятничук, Т. В. та Михнюк, М. І., 2015. *Модульно-компетентнісний підхід у підготовці кваліфікованих робітників будівельної та машинобудівельної галузей: монографія.* Київ: ІПТО НАПН України.

Олейникова, О.Н., Муравьева, А.А., Коновалова, Ю.В. та Сартакова, Е.В., 2010. *Модульные технологии: проектирование и разработка образовательных программ: учеб. Пособие.* Москва: Альфа-М; ИНФРА-М.

Паньков, Д. В., 2003. Організація модульної підготовки працівників у відповідності з вимогами ринку праці. *Проблеми інж.-пед. Освіти*, 5, с. 260-266.

Ягупов, В. В., 2014. Модульно-компетентнісний підхід до професійної підготовки майбутніх кваліфікованих робітників будівельної та машинобудівної галузей. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка*, 7, с. 19-26.

Bazyl, L. O., Shatkovska, H. I., Klymenko, M. M., and Radkevych, V. O., 2019. Psychological and pedagogical features of the career growth of vocational education's teachers. *Opcion,* 35 (Special Issue 23), 763-779.

Translated & Transliterated

Zimnyaya, I. A., 2004. Klyuchevyie kompetentsii kak rezultativno-tselevaya osnova kompetentnostnogo podhoda v obrazovanii: avtorskaya versiya *[Key competencies as a result-based basis of the competence approach in education: author's version]*. Moskva: Issledovatelskiy tsentr problem kachestva podgotovki spetsialistov, [in Russian].

Herliand, T. M,, Drozich, I. A., Kulalaieva, N. V., Romanova, H. M. ta Shymanovskyi, M. M., 2019. *Orhanizatsiia dualnoi formy navchannia u zakladakh profesiinoi (profesiino-tekhnichnoi) : praktychnyi posibnyk [Organization of dual form of education in professional (vocational) institutions: practical manual]*. Zhytomyr: Polissia, [in Ukrainian].

Kravets, S. H., Kravets, Yu. I., Derevianko, N. P. ta Oliferchuk, O. H., 2014. *Pedahohichni osnovy formuvannia zmistu pidhotovky kvalifikovanykh robitnykiv za intehrovanymy profesiiamy: posibnyk [The Pedagogical Principles of Building the Content of Training of Skilled Workers for Integrated Professions: a Textbook]*. Kyiv: Polihrafservis, [in Ukrainian].

Kulalaieva, N. V. ta Gerliand, T. M., 2018. Dualna forma navchannia – zaporuka yakisnoi pidhotovky suchasnoho kvalifikovanoho robitnyka*[Dual form of training is the key to qualitative training of a modern skilled worker.]. Profesiino-tekhnichna osvita [Vocational Education],* 4, s. 40, [in Ukrainian].

Luzan, P. H., 2012. Realizatsiia kompetentnisnoho pidkhodu v profesiinii osviti: tekhnolohichnyi aspekt *[Realization of the competence approach in vocational education: technological aspect]. Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPN Ukrainy. Profesiina pedahohika [Scientific herald of the Institute of vocational education and training of NAES of Ukraine. Professional Pedagogy],* 4, s. 5-11, [in Ukrainian].

Luzan, P. H., Yahupov, V. V., Lukianenko, H. I., Piatnychuk, T. V. ta Mykhniuk, M. I., 2015. *Modulno-kompetentnisnyi pidkhid u pidhotovtsi kvalifikovanykh robitnykiv budivelnoi ta mashynobudivelnoi haluzei: monohrafiia [Modular competence approach in the training of skilled workers of construction and machine-building branches: monograph]*. Kyiv: IPTO NAPN Ukrainy, [in Ukrainian].

Oleynikova, O.N., Muraveva, A.A., Konovalova, Yu.V. ta Sartakova, E.V., 2010. *Modulnyie tehnologii: proektirovanie i razrabotka obrazovatelnyih programm: ucheb. posobie [Modular technologies: design and development of educational programs: textbook]*. Moskva: Alfa-M; INFRA-M., [in Russian].

Pankov D.V., 2003. Orhanizatsiya modulnoi pidhotovky pratsivnykiv u vidpovidnosti z vymohamy rynku pratsi *[Organization of modular training of employees in accordance with the requirements of the labor market.]. Problemy inzhenernopedahohichnoi osvity [Problems of engineer pedagogical education],* 5, s. 160-166, [in Ukrainian].

Yahupov, V.V., 2014. Modulno-kompetentnisnyi pidkhid do profesiinoi pidhotovky maibutnikh kvalifikovanykh robitnykiv budivelnoi ta mashynobudivnoi haluzei *[Modular competence approach to professional training of future skilled workers of construction and machine-building industries]. Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPN Ukrainy. Profesiina pedahohika [Scientific herald of the Institute of vocational education and training of NAES of Ukraine. Professional Pedagogy],* 7, s. 19-26, [in Ukrainian].

Bazyl, L. O., Shatkovska, H. I., Klymenko, M. M., and Radkevych, V. O., 2019. Psychological and pedagogical features of the career growth of vocational education's teachers. *Opcion*, 35 (Special Issue 23), 763-779, [in English].

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Професійна підготовка майбутніх кваліфікованих робітників у закладах професійної (професійно-технічної) освіти на модульно-компетентнісній основі

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Реферат

Актуальність: для здійснення ефективної особистісної самореалізації майбутнього кваліфікованого робітника система професійної (професійно-технічної) освіти мусить реагувати на зміни, що відбуваються у сфері праці, економіці, структурі ринку професій, попиті на нові компетентності. Все це вимагає істотного підвищення ступеня гнучкості системи цієї освіти, створення принципово нових форм її взаємодії з ринком праці, роботодавцями (соціальними партнерами), для активної їх участі в її подальшому розвитку.

Мета: здійснити теоретико-методологічне обґрунтування системи професійної підготовки майбутніх кваліфікованих робітників у закладах професійної (професійно-технічної) освіти на засадах модульно-компетентнісного підходу.

Методи: теоретичний аналіз, вивчення нормативних документів, аналіз навчальних програм – для з'ясування стану розробленості проблеми та визначення напрямів дослідження; порівняння – з метою вивчення різних наукових поглядів на проблему; аналіз і синтез – задля розроблення критеріїв та показників готовності майбутніх кваліфікованих робітників до здійснення професійної діяльності на модульній основі; систематизація та узагальнення – для формулювання висновків.

Результати: розкрито істотні характеристики модульно-компетентнісного навчання, охарактеризовано його особливості та основні аспекти, що створюють належні умови для формування ключових компетентностей та успішності навчання майбутніх кваліфікованих робітників, для розвитку їхньої творчої пізнавальної активності й самостійності в умовах модульного оволодіння професійною діяльністю.

Висновки: у здійсненій професійної підготовки майбутніх кваліфікованих робітників на модульно-компетентнісній основі відбувається комплексне засвоєння умінь і знань в рамках формування конкретної компетентності особистості, яка забезпечує виконання певної трудової функції та відображає вимоги сучасного ринку праці.

Ключові слова: *компетентність, модуль, модульно-компетентнісний підхід, модульна технологія, професійно-технічна освіта.*

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SWOT-ANALYSIS OF THE COMPETENCE-ORIENTED EDUCATIONAL PROCESS

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Abstract.

Relevance: the need to analyze the competence-oriented educational process is determined by the rapid development of educational information technologies and their introduction into the educational process. In Ukraine, as well as in foreign countries, the competence-oriented educational process is gaining broad-based development. Much debate, both internationally and at the level of different countries, has been conducted on the competence-oriented approach to forming the content of education. The important step in the formation of competence is to identify the main areas of activity in which the future specialist will reach vital competence, that is, be prepared for life.

Purpose: to identify the main threats to the formation of competence-oriented educational process and substantiate the strategic positions of its construction.

Methods: analysis and synthesis – to find out the state and level of development of the studied problem; generalization – to formulate conclusions and recommendations on teachers' readiness to introduce the competence-oriented approach; diagnostic (questionnaire, conversation) – to study information about the state of readiness of pedagogical staff to use the competence-oriented educational process.

Results: the main aspects of the implementation of the competence-oriented educational process are revealed, which should be laid down in branch programs, subjects, educational and methodical literature. The methodology of pedagogical influence on the level of content of the competence of educational process is substantiated. Strengths and weaknesses of implementation of the competence-oriented educational process are identified.

Conclusions: the conducted SWOT-analysis of the competence-oriented educational process has allowed to identify urgent needs for the improvement of quality of educational environment, perfection of approaches to its development and introduction of new methods into the educational process.

Keywords: *educational process, SWOT-analysis, competentce-oriented educational process, quality of education, teacher.*

Introduction. The priority area in the development of the educational system of the new generation is to consider the learning process and its outcomes through the prism of competence-based approach that contributes to the modernization of educational content and complements a number of educational innovations and classical approaches aimed at achieving modern educational goals.

Undoubtedly, the formation of the competence-oriented educational process depends on the readiness of the graduate to be active in the conditions of development of IT technologies and the implementation of lifelong learning.

Sources of research. In the works of European scientists: E. Svenik, R. Danon, A. Weetrheim, P. Vogelius, R. Jacqui-Sivonen, P. Wrignod, Huller Solger, M. Norris, P. Trier, F. Kelly, J. Sacken, D. Miller the selection of key competences is mentioned.

In the system of higher and general secondary education, the competence approach is indicated in the works of: I. Drach, I. Babin, P. Bachynsky, N. Bibik, G. Havryshak, I. Hudzik, N. Dvornikova, Y. Kodlyuk, O. Lokshina, S. Nikolaenko, O. Ovcharuk, L. Pilgun, O. Pometun, I. Rodigina, O. Savchenko, O. Sadivnyk, L. Sen, S. Sisoeva, O. Sytnik, T. Smagina, G. Tereshchuk, S. Trubacheva. , N. Fomenko and others.

Competence approach as a methodological basis for ensuring the content and quality of higher education was studied by foreign researchers: J. Raven, J. Bowden, S. Maslach, M. Leiter, E. Short, E. Toffler, R. White, A. Bermus, R. Haigerty, A. Mayhew and others.

Purpose of the paper: to identify the main threats to the formation of the competence-oriented educational process and substantiate the strategic positions of its construction.

Research methods: analysis and synthesis – to find out the state and level of development of the studied problem; generalization – to formulate conclusions and recommendations on teachers' readiness to introduce the competence-oriented approach; diagnostic (questionnaire, conversation) – to study information about the state of readiness of pedagogical staff to use the competence-oriented educational process.

Results and discussion. The targeted entry of Ukraine into the world community, the modernization of the international direction in the clear priorities of the future require the development of the modern educational space as a megasystem, where a clear sign of content is the development of the competence approach.

According to the recommendations of the European Parliament, "competence" is interpreted as a set of knowledge, skills and attitudes relevant to the situation. The core competencies are those that are needed by all citizens for personal realization and development, active social life, social cohesion and employment opportunities, since their basic framework is critical thinking, creativity, initiative, ability to solve problems, risk assessment, ability to conclude, manage emotions constructively (Verkhovna Rada of Ukraine. Legislation of Ukraine, 2006).

Based on the analysis of scientific sources, the concept of "competence approach" is interpreted in the context of the orientation of the educational process to the formation and development of key (basic, main) and subject competences of the individual. The result of such a process should be the formation of general competence, which is a set of key competences and an integrated personality trait, which is formed in the learning process and contains knowledge, skills, attitudes, experience of activity and behavioral models of personality (Chernetska, 2013).

The competence approach is closely linked to the person-centered and action-oriented approaches. The person-centered approach creates comfortable conditions for learning, under which each student feels his need, confidence in himself, reveals his abilities. The action-oriented approach can be implemented only in the course of students' fulfillment of a certain set of actions.

The competence-oriented educational process is the focus of educational process on preparation of students for life, development of their intellectual and creative abilities, mastering of knowledge, actualization of skills, in particular the ability to communicate, be in contact with other people, solve specific problems, be able to respond flexibly to changes in life.

There is a great deal of debate about the competence-oriented educational process being conducted at the international level and in Ukraine as a whole. Therefore, these aspects have prompted to conduct a SWOT analysis to develop the competence-oriented educational process.

Thus, highlighting the strengths and weaknesses, opportunities and threats, we will conduct a SWOT-analysis of the current state of organization of the competence-oriented educational process.

Strengths provide effective legal documents that underpin the competence-oriented educational process. These include: the Law of Ukraine "On Education", "State Standards of Education", "National Qualifications System" and "Education Program".

The Law of Ukraine "On Education" clearly states that the educational process is a system of pedagogical, scientific and methodological measures aimed at personal development through the formation of competences (Verkhovna Rada of Ukraine. Legislation of Ukraine, 2017, pp. 4).

The State Education Standard sets out clear requirements for the compulsory competences and learning outcomes of general secondary education applicants (Verkhovna Rada of Ukraine. Legislation of Ukraine, 2018, pp. 12).

General secondary education involves the comprehensive development of the individual, the ability to learn throughout life, as well as education, the desire for self-improvement.

The competence approach has gone beyond theoretical research and is the basis for the development of educational programs and technologies. In particular, a direction in pedagogy has emerged in the United States, called competence-based education (National University of Lviv Polytechnic, 2014, pp. 9).

The problem of formation of key and subject competences of young people has always been in the focus of attention of Ukrainian scientists – T. Baibari, N. Bibik, O. Bidi, S. Bondar, M. Vashulenko, I. Hudzik, L. Koval, O. Lokshina, O. Onoprienko , O. Ovcharuk, O. Pometun, K. Ponomaryova, O. Savchenko, S. Trubacheva and others. The scientists defined the content of the basic concepts of "competence" and "competency", carried out a comparative description of key competences in European educational systems and examined the methodological aspects of the for-

mation of competencies and competences (National University "Lviv Polytechnic", 2014).

Therefore, it should be noted that the analysis of the competence-oriented educational process has identified strengths based on:

– requirements of the State standards for education of students and graduates;

– the national system of qualifications of graduates;

– a concept that provides for the acquisition of vital competences;

– the main requirements for the teacher (motivation, recommendations for the implementation of the competence approach);

– national scientists' development on the problem of youth competence formation.

Today, the formation of educational competences takes place at interstate, inter-ethnic levels, where the main priorities of education are decided. Accordingly, there is a strategy for many countries – "Education for All". There are quite well-known international organizations involved in the study of education and competence-oriented education. These include: International Organization for Standardization, Council of Europe, UNICEF.

In Switzerland, DeSeCo's "Definition and Selection of Competences: Theoretical and Conceptual Foundations Program" was launched (Chernetska, 2013, pp. 112).

The purpose of the program is to summarize and systematize the experience of many countries. After a detailed analysis, it is revealed that the competence of the individual manifests itself in different contexts (social, economic, political). Besides, it is emphasized that not only the school but also the family, work, religious and cultural organizations are responsible for acquiring the necessary competencies.

In order to set up educational structures in Europe, the TUNING (Tuning Educational Structures in Europe) project has been implemented in Ukraine today. It is a project on the Harmonization of Educational Structures in Europe, launched in 2000 to combine the goals of the Lisbon Strategy and the Bologna Process, taking into account the needs of the higher education sector. Its main task was to implement the Bologna Process at the level of higher educational institutions and subject areas (Ruchen and Salganik, 2003, pp. 118).

Undoubtedly, analyzing the approaches of European countries and Ukraine itself to the organization of the competence-oriented educational process, we can point out the following opportunities:

– to improve the innovative educational space, which will determine the competence– oriented educational process in the 21st century;

-– wide recognition of the competence-oriented educational process in the countries of Europe, the European Union, which corresponds to the vision of European education;

– discussing the problem of the competence-oriented educational process at all levels;

– to provide educational training for teachers with regard to the requirements for the person of the XXI century.

– to apply the availability of promising educational methods, European experience in implementing the competence-oriented educational process, taking into account certainty and clarity.

Weaknesses. The main goal of the competence-oriented approach in education is to create a ready-to-live graduate with the ability to navigate a modern society, be adapted to the rapid development of innovative technologies, be able to respond to social challenges and further personal development. Accordingly, the teacher should focus on the smallest achievement of the students, the degree of their development.

Undoubtedly, the level of content of the competence educational process is influenced by the teacher (teacher). At the same time, the level of the learning process is ensured by his understanding of his actions during the lesson.

On this basis, the implementation of the competence approach will increase if more time is given for different forms of independent work in educational programs (not due to the student workload, but the correct allocation of time between audit hours and extracurricular hours). In Europe, this indicator is around 25%.

Therefore, the main characteristic of the competence approach is the implementation of new techniques and the achievement of learning outcomes.

At the same time, we find that the weakness of the competence-oriented educational process is:

– refusal of encyclopedic content of schooling;

– monitoring of the quality of education, implementation of key competences in the content of education;

– conscious experience in the main learning outcomes.

Threats.

An important aspect of the competence-oriented education is the formation of the content and organization of the educational process, due to the improvement of pedagogical skills of each teacher through the introduction of new teaching methods and techniques, modern educational trends.

A number of laws and regulations have been developed to implement modern education, and there is also a new system for evaluating students' academic achievement, which promotes to transfer the compe-

tence idea into the level of implementation. However, the competence approach has not yet been introduced in all fields and subjects, although it is clearly stated in the State Standard.

Therefore, the main threats to the full implementation of the competence-oriented educational process are:

– low percentage of teachers who understand the competence-oriented approach (10%);

– lack of practical ways of implementing the competence-oriented approach;

– outdated material and technical base.

As a result of the conducted SWOT-analysis of the current state of the organization of the competence-oriented educational process, it has been established:

– to amend the state standard of education, taking into account a consistent presentation of the competence approach in all fields and subjects;

– develop practical recommendations to implement the competency approach;

– introduce retraining of teachers at the state level;

– improve the implementation of the competence-based approach in programs and textbooks;

– to monitor the quality of student knowledge assessment in order to create competence as a result of learning

We see the prospects for further research in studying the stages of implementation of the competence-oriented educational process.

An analysis of the competence-oriented educational process is given in *Table 1*.

For further analysis, the ranking of internal factors of strengths and weaknesses *(Table 2)*; internal factors of opportunity *(Table 3)*; and internal factors of threats *(Table 4)* was conducted.

The choice of strategy for the implementation of the competence-oriented educational process is given in *Table 5*.

Conclusions. Monitoring the quality of vocational training through the competence-based approach is the weakness of the problem. At the same time, paying attention upon the educational process in the countries of Europe and the European Union, the tendencies of the competence-oriented approach need to be deeply introduced, and in modern conditions it can be achieved at the expense of self-education and constant improvement of professional competence of teachers.

Table 1

A matrix of SWOT analysis of the competence-oriented educational process

Strengths:	**Weaknesses:**
– State standards (educational requirements for students and graduates); – National graduate qualification system; – Concepts of development of pedagogical education, which includes the acquisition of vital competences; – basic requirements for the teacher (motivation, recommendations for the implementation of the competence approach); – national scientists' development on the problem of youth competence formation.	– refusal of encyclopedic content of schooling; – the need for monitoring the quality of education; – the need to introduce key competences in the content of education; – limitation of experience in relation to main learning outcomes
Opportunities:	**Threats:**
– improvement of the innovative educational space, which will determine the competence-oriented educational process in the 21st century; – wide recognition of the competence-oriented educational process in the countries of Europe, the European Union, which corresponds to the vision of European education; – introduction of discussion of the problem of the competence-oriented educational process at all levels; – providing educational training for teachers, taking into account the requirements for the person of the XXI century, his life competencies, disclosing the skills needed for the person in the modern world; – application of existing perspective educational methods, European experience in implementing the competence-oriented educational process, taking into account certainty and clarity	– reduction of the significant percentage of teachers who understand the competence-oriented approach (10%); – lack of practical ways of implementing a competently oriented approach; – outdated material and technical base.

Table 2.

Matrix of internal factors of strengths and weaknesses (ranking)

Impact of Strengths and Weaknesses	**Strong Impact 6 points (each position)**	**Notable impact 4 points**	**Moderate impact 2 points**	**Low impact 1 point**
Strengths	National graduate qualification system	Concepts of development of pedagogical education, which contains the acquisition of vital competences	State standards	Basic requirements for the teacher
Weaknesses	Need for monitoring the quality of education	Need for implementing key competences in the content of education	Abolishing the encyclopedic content of school education	Limitation of experience of activity due to main learning outcomes

Table 3

The matrix of internal factors of opportunity (ranking)

Probability of using opportunities	**Strong impact**	**Considerable impact**	**Moderate impact**	**Low Impact**
High probability	1) improvement of the innovative educational space, which will determine the competence-oriented educational process in the 21st century; 2) introducing a broader discussion of the problem of the competence-oriented educational process at all levels; ***6 points***	1) providing educational training for teachers, taking into account the requirements for the person of the XXI century, his life competencies, disclosing the skills necessary for the person in the modern world; ***5 points***	***4 points***	***3 points***
Medium probability	broad recognition of the competence-oriented education process in Europe, the European Union, that corresponds to the vision of European education ***5 points***	application of the existing perspective educational methods, European experience in the implementation of the competence-oriented educational process, taking into account certainty and clarity ***4 points***	***3 points***	***2 points***
Low probability	***4 points***	***3 points***	***2 points***	***1 point***

Table 4

Matrix of Internal Factors of Threats (Ranking)

Probability of threat emergence	**Destruction**	**Critical Condition**	**Severe condition**	**“Light Strikes”**
High probability	lack of practical ways to implement the competence-oriented approach in life ***6 points***	Reduction of the significant percentage of teachers who understand the competence-oriented approach (10%) ***5 points***	***4 points***	***3 points***
Medium probability	***5 points***	***4 points***	***3 points*** outdated material base	***2 points***
Low probability	***4 points***	***3 points***	***2 points***	***1 point***

Table 5

SWOT analysis of the choice of strategy for implementation of the competence-oriented educational process (after ranking)

Strengths:	**Weaknesses:**
National Graduate Qualification System	the need for monitoring the quality of education
Opportunities:	**Threats:**
1) improvement of the innovative educational space, which will determine the competence-oriented educational process in the XXI century	lack of practical ways of implementing the competence- oriented approach

Taken into account the major threats to the low level of teacher training, lack of clear methodologies and practical ways of implementation, combined with the outdated material base, steps should be taken to overcome them: develop uniform clear standards for the implementation of the competence-oriented educational process; prepare pedagogical and scientific-pedagogical staff for implementation of the competence-oriented educational process; monitor programs and textbooks to provide clear recommendations for the competence-oriented approach; improve the methodology of assessing the quality of knowledge of future specialists on the basis of the competence-oriented educational process.

Implementation of the main strategic positions for the development of the competence-oriented educational process will allow us to reach the European level of education development in Ukraine.

List of references

Верховна Рада України. Законодавство України, 2006. *Про основні компетенції для навчання протягом усього життя. Рекомендація 2006/962/ЄС Європейського Парламенту та Ради (ЄС) від 18 грудня 2006 р.* [online] (Останнє оновлення 18 Грудень 2006) Доступно: <https://zakon.rada.gov.ua/laws/show/994_975> [Дата звернення 07 Листопад 2019].

Верховна Рада України. Законодавство України, 2017. *Про освіту.* Розпорядження Кабінету Міністрів України від 05 вересня 2017 р. № 38-39. [online] (Останнє оновлення 06 Червень 2019) Доступно: <https://zakon.rada.gov.ua/laws/show/2145-19> [Дата звернення 02 Серпень 2019].

Верховна Рада України. Законодавство України, 2018. *Державний стандарт початкової світи:* Постанова Кабінету Міністрів України від 21 лютого 2018 р. № 87. [online] (Останнє оновлення 24 Липень 2019) Доступно: <https://zakon.rada.gov.ua/laws/show/87-2018-п> [Дата звернення 25 Серпень 2019].

Національний університет «Львівська політехніка», 2014. *Компетентнісний підхід у побудові освітніх програм.* [online] Доступно: <http://lp.edu.ua> [Дата звернення 28 Серпень 2019].

Чернецька, Т.І., 2013. Компетентнісно орієнтований підхід як дієвий засіб осучасненння мети і процесу навчання підростаючих поколінь. *Наукові записки Кіровоградського державного педагогічного університету ім. В. Винниченка. Сер. Педагогічні науки,* 121 (II), с. 319-323.

Ruchen, D. S. and Salganik L. H., 2003. Key Competencies for a Successful Life and a WellFunctioning Society. G?ttingen: *Hogrefe & Huber Publishers.*

Translated & Transliterated

Verkhovna Rada Ukrainy. Zakonodavstvo Ukrainy [Verkhovna Rada of Ukraine. Legislation of Ukraine], 2006. *Pro osnovni kompetentsii dlia navchannia protiahom usoho zhyttia. Rekomendatsiia 2006/962/IeS Yevropeiskoho Parlamentu ta Rady (IeS) vid 18 hrudnia 2006 r. [On basic competences for lifelong learning. Recommendation 2006/962 / EC of the European Parliament and of the Council (EU) of 18 December 2006].* [online] (Ostannie onovlennia 18 Hruden 2006) Dostupno: <https://zakon.rada.gov.ua/laws/show/994_975> [Data zvernennia 07 Lystopad 2019], [in Ukrainian].

Verkhovna Rada Ukrainy. Zakonodavstvo Ukrainy [Verkhovna Rada of Ukraine. Legislation of Ukraine], 2017. *Pro osvitu. Rozporiadzhennia Kabinetu Ministriv Ukrainy vid 05 veresnia 2017 r. № 38-39. [On education. Order of the Cabinet of Ministers of Ukraine dated September 05, 2017 No. 38-39].* [online] (Ostannie onovlennia 06 Cherven 2019) Dostupno: <https://zakon.rada.gov.ua/laws/show/2145-19> [Data zvernennia 02 Serpen 2019], [in Ukrainian].

Verkhovna Rada Ukrainy. Zakonodavstvo Ukrainy [Verkhovna Rada of Ukraine. Legislation of Ukraine], 2018. *Derzhavnyi standart pochatkovoi osvity: Postanova Kabinetu Ministriv Ukrainy vid 21 liutoho 2018 r. № 87 [National Standard of the Initial World: Cabinet of Ministers of Ukraine Decree No. 87 of February 21, 2018].* [online] (Ostannie onovlennia 24 Lypen 2019) Dostupno: <https://zakon.rada.gov.ua/laws/show/87-2018-p> [Data zvernennia 25 Serpen 2019], [in Ukrainian].

Natsionalnyi universytet «Lvivska politekhnika» [Lviv Polytechnic National University], 2014. *Kompetentnisnyi pidkhid u pobudovi osvitnikh prohram [Competence Approach to Forming Educational Programs].* [online] Dostupno: <http://lp.edu.ua> [Data zvernennia 28 Serpen 2019], [in Ukrainian].

Chernetska, T.I., 2013. Kompetentnisno oriientovanyi pidkhid yak diievyi zasib osuchasnennnia mety i protsesu navchannia pidrostaiuchykh pokolin. *[Competence-oriented approach as an effective means of updating the purpose and*

learning process of the younger generations.] Naukovi zapysky Kirovohradskoho derzhavnoho pedahohichnoho universytetu im. V. Vynnychenka. Ser. Pedahohichni nauky [Scientific notes of Kirovograd State Pedagogical University named after V. Vinnichenko. Series. Pedagogical Sciences.], 121 (II), s. 319-323, [in Ukrainian].

Ruchen, D. S. and Salganik L. H., 2003. *Key Competencies for a Successful Life and a WellFunctioning Society.* Gottingen: Hogrefe & Huber Publishers, [in English].

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SWOT-аналіз компетентнісно орієнтованого освітнього процесу

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Реферат.

Актуальність: необхідність проведення аналізу компетентнісно орієнтованого освітнього процесу визначається швидким розвитком освітніх інформаційних технологій та впровадженням їх в освітній процес. В Україні, як і в зарубіжних країнах, широкого розвитку набуває компетентнісно орієнтований освітній процес. На сьогодні багато дискусій ведеться щодо компетентністно орієнтованого підходу до формування змісту освіти. Важливим етапом при формуванні компетентності є визначення основних сфер діяльності, в яких майбутній фахівець досягне життєвої компетентності, тобто буде підготовлений до життя.

Мета: виявити основні загрози формуванню компетентнісно орієнтованого освітнього процесу та обґрунтувати стратегічні положення його побудови.

Методи: аналіз і синтез – з метою з'ясування стану та рівня розробленості досліджуваної проблеми; узагальнення – для формулювання висновків і рекомендацій щодо готовності вчителів до впровадження компетентнісно орієнтованого підходу; діагностичні (анкетування, бесіда) – для вивчення інформації про стан готовності педагогічних працівників до використання компетентнісно орієнтованого освітнього процесу.

Результати: розкрито основні аспекти реалізації компетентнісно орієнтованого освітнього процесу, що мають бути закладені в галузевих програмах, предметах, навчальній та методичній літературі. Обґрунтовано методику педагогічного впливу на рівень формування змісту компетентнісного освітнього процесу. Визначено сильні і слабкі сторони впровадження компетентнісно орієнтованого освітнього процесу.

Висновки: проведений SWOT-аналіз компетентнісно орієнтованого освітнього процесу дав змогу визначити нагальні заходи з покращення якості освітнього середовища, вдосконалення підходів до його розвитку та впровадження в освітній процес нових методик.

Ключові слова: *освітній процес, SWOT-аналіз, компетентнісно орієнтований освітній процес, якість освіти, вчитель.*

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INSTITUTE OF VOCATIONAL EDUCATION AND TRAINING OF NAES OF UKRAINE

KEY COMPETENCES OF FUTURE GARMENT WORKERS: THE OFFER AND DEMAND IN THE LABOUR MARKET

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Abstract.

Relevance: State standards for professional (vocational) education of such professions as "seamstress", "dressmaker", "cutter" reveal the content of essential professional competences of these professions, as well as list general (key) competences common to all three professions. They have led to the need to identify a separate list of key competences required by employers of garment enterprises for each profession.

Aim: analysis, comparison and generalization of the offer and demand for key competences of garment workers in the Ukrainian labour market; determination of personal qualities, demanded by modern employers of Ukrainian garment enterprises for such professions as "seamstress", "dressmaker", "cutter".

Methods: the paper has analyzed, compared and summarized 270 vacancies and 344 curricula vitae available on Ukrainian and international job search websites to determine the level of needs of Ukrainian employers in the garment industry for garment workers with key competences (www.work.ua, www.hh.ua, www.rabota.ua).

Results. The paper clarifies the statistical needs of employers of Ukrainian garment enterprises for seamstresses, dressmakers and cutters with key competences. It compares the offer and demand for garment workers and proves that they cannot adequately meet the needs of modern employers due to insufficient levels of their key competences. It highlights that dressmakers and cutters are the more in-demand workers with key competences and should work in the field of public services or a single production. It specifies the reasons for weak demand for well-developed personal qualities for such a profession as "seamstress". Besides, it compares the demand of the Ukrainian and global labour markets for soft skills of garment workers. It shows that international employers are more interested in soft skills, being aware of their importance. However, this process is still on the way in Ukraine.

Conclusions: the paper proves the interdependence between the need for well-developed personal qualities of skilled workers and types of profession and production. It reveals the role of garment workers' key competences in developing personal qualities required by Ukrainian garment enterprises for such professions as "seamstress", "dressmaker" and "cutter", as well as the connection between key and professional competences.

Keywords: *key competences, professional competences, garment industry, skilled worker, professions "dressmaker", "cutter", "seamstress".*

Introduction. Today, there are transformational processes in all spheres of life which affect the labour market. One can see how the ratings of "in-demand" professions and requirements for skilled workers are changing. Employers are becoming more and more interested in soft skills that are independent of an individual profession and closely related to personal qualities. Therefore, education must develop key (general, universal) competences and promote lifelong learning (The Ministry of Education and Science of Ukraine, 2018).

State standards for professional (vocational) education of such professions as "seamstress", "dressmaker", "cutter" reveal the content of essential professional competences of these professions, as well as list general (key) competences common

to all three professions. They have led to the need to identify a separate list of key competences required by employers of garment enterprises for each profession.

Sources. According to the Recommendation of the European Parliament and of the Council "On key competences for lifelong learning", the latter are seen as a set of knowledge, skills and attitudes needed by all citizens for personal self-realization and development, active social life, social cohesion and employment (Verkhovna Rada Legislation of Ukraine, 2006).

The problem of developing key competences in future skilled workers is mostly considered in the context of a competency-based approach. Some think that key competences, aimed at developing critical thinking, reflection and determining one's position (Ovcharuk ed., 2004, pp. 10, 16, 46; Kravets, 2014), contribute to developing professional skills and professional career (Kravets and other, 2014; Lemeshko, 2018; Zakatnov, 2007; 2015; Yershova, 2018; Seredina, 2018; Yablunovska, 2018). The New Ukrainian School, proceeding from the Recommendation of the European Parliament and of the Council (EU), regards key competences as a combination of knowledge, types of thinking, skills, abilities and other personal qualities, which can ensure personal realization and lifelong success. Key competencies include communication in the national language; communication in foreign languages; mathematical literacy; competencies in science and technology; digital competency; lifelong learning skill; a sense of entrepreneurship; social and civic competencies; cultural awareness; environmental awareness and healthy lifestyles (The Ministry of Education and Science of Ukraine, 2016). Such researchers as O. Bazeliuk (2018), M.-O. Yershov (2018; 2019) and L. Petrenko (2017) focus on the dependence of successful professional career on the development of future skilled workers' digital competence.

State standards for professional (vocational) education of such professions as "seamstress" (2016), "dressmaker" (2016) and "cutter" (2016) indicate that general and professional competences imply "the ability of the individual to perform particular activities that is expressed through knowledge, understanding, skills and values". General competences for these professions are defined as follows: promptness in making right decisions in an emergency at work; ability to be responsible for professional activities; knowledge of professional terminology; ability to act in non-standard situations; ability to work in a team; adherence to professional ethics; conflict prevention.

The paper aims to analyze the offer and demand for key competences of garment workers in the Ukrainian labour market and determine the modern personal qualities required by employers of Ukrainian garment enterprises.

Methods: the paper has analyzed, compared and summarized 270 vacancies and 344 curricula vitae available on Ukrainian and international job search websites to determine the level of needs of Ukrainian employers in the garment industry for garment workers with key competences (www.work.ua, www.hh.ua, www.rabota.ua).

Results and discussion. The subject matter of analysis covers the vacancies and curricula vitae available on popular job search websites. The paper also studies employers' demand for garment workers with key competences, which they need for self-realization, employment, professional development and career success in the globalized society.

The analysis of vacancies for garment workers shows that 42% of employers are in need for seamstresses, dressmakers and cutters with professional and key competences, whereas 58% of employers focus only on professional competences or do not place requirements for future workers at all *(see Fig. 1)*.

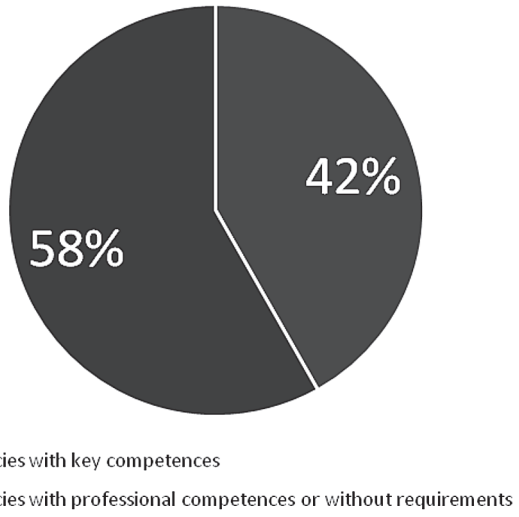

Fig. 1. Demand for workers with key competences (Systematized based on the vacancies available on relevant websites between August, 14 and September, 4, 2019)

The paper clarifies that employers seek such soft skills as *responsibility* (courage in making independent decisions, responsibility for one's actions, personal standards) – 42.5%; *teamwork* – 41.6%; focus on learning, development and *outcomes* – 33.6%. Equally important are the following skills: *time management* (ability to organize one's work and time, punctuality) – 23.0%; *creativity* (ability to think innovatively, apply advanced approaches to solving problems) – 17.7%; *communication skills* (successful interaction with people, emotional intelligence) – 15,9%. Employers pay the least attention to focus on

the *customer* – 8.0%, *multitasking* – 8.0% and stress *resistance* – 3.5% *(see Fig. 2)*.

The analysis of the demand for garment workers' key competences indicates different levels of requirements for seamstresses, dressmakers and cutters. The expectations of employers of garment enterprises regarding future workers' personal qualities prove that *responsibility* (14.2%), *teamwork* (11.5%), focus on development and *outcomes* (8.8%) and *time management* (5.3%) are the most critical skills, apart from professional ones, for seamstresses. These skills must ensure the continuity, speed and quality of making clothing in mass production. However, f*ocus on the customer and stress resistance* are not among the requirements at all. This may indicate the specificity of seamstresses' work associated with monotonous operations in the technological process.

Such skills as *teamwork* (16.8%), *responsibility* (15.9%), focus on development and *outcomes* (14.2%) and *time management* (8.8%) remain equally crucial for dressmakers. Recently, the demand for *creativity* (8.8%) and communication *skills* (6.2%) has been increasing. It is explained by the opportunity to work in dressmaker's studios, sewing workshops, where dressmakers not only perform technological operations on the sewing equipment but directly participate in the organization of production, ordering, communication with cutters or designers. However,

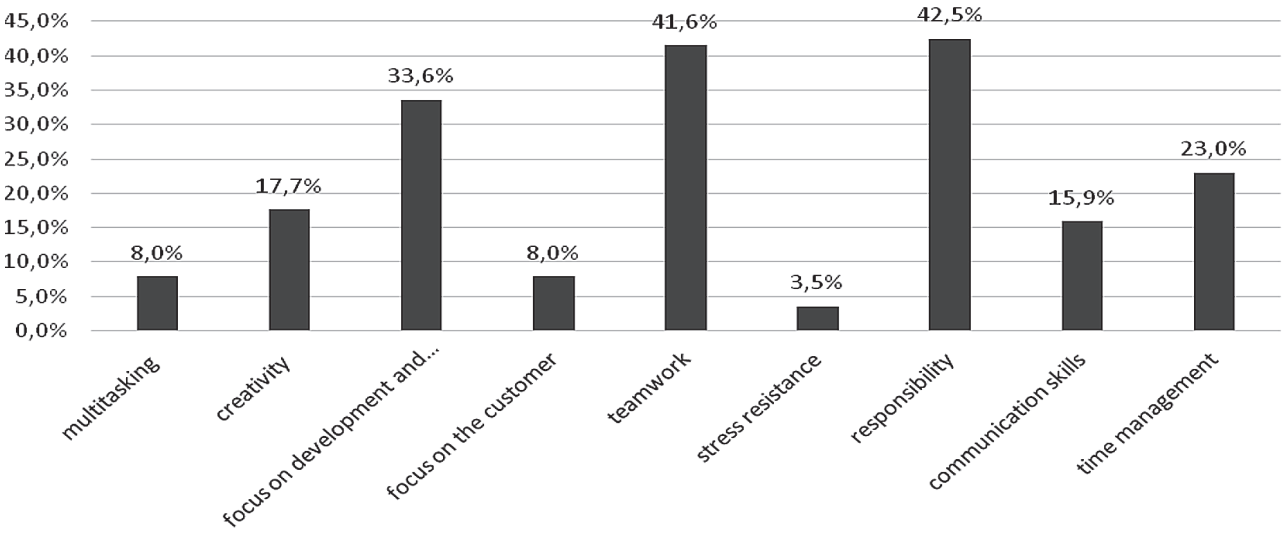

Fig. 2. Demand for the main key competences of garment workers in the labour market (Systematized based on the vacancies available on relevant websites between August, 14 and September, 4, 2019)

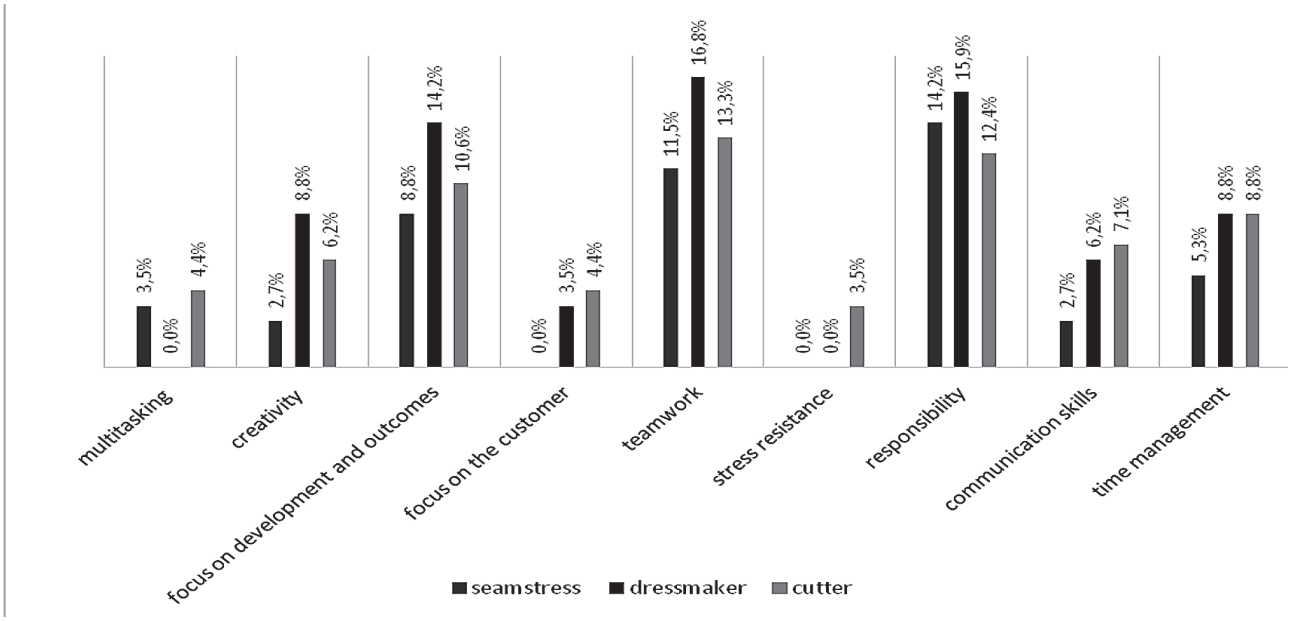

Fig. 3. Comparing the demand for key competences of seamstresses, dressmakers and cutters in the labour market (Systematized based on the vacancies available on Ukrainian job search websites between August, 14 and September, 4, 2019)

employers do not require dressmakers to be capable of *multitasking* and *stress resistance (see Fig. 3)*.

Teamwork (13.3%), *responsibility* (12.4%), *focus on development and outcomes* (10.6%), *time management* (8.8%), *communication skills* (7.1%), *creativity* (6.2%), *multitasking* (4.4%), *focus on the customer* (4.4%) and *stress resistance* (3.5%) are rather fundamental skills for cutters *(see Fig. 3)*. The increasing demand for the last four skills may be related to cutters' workload, responsibility and specificity of their work in mass production industries, where they cooperate with designers, technologists, supervisors of sewing workshops and teams of the cutting-out space, as well as public service enterprises, where they directly communicate with customers, designers, teams of dressmakers and finalize orders, being able to work with several products at the same time.

The analysis of the demand for garment workers with soft skills by type of production shows that dressmaker's studios, sewing shops, sewing workshops and small enterprises producing products for shops and brands place the most significant number of requirements for personal qualities of such workers. These are garment industries which have low capacity, work with small teams and produce products in a single copy or a limited quantity. Such activity requires individual and creative approaches to every order and customer, good organization and responsibility, team support and enables professional and personal realization. Managers of dressmaker's shops consider teamwork, *responsibility* (23.0%) and *focus on development and outcomes* (17.7%) as the essential skills. *Creativity* (13.3%), *time management* (13.3%), *communication* (9.7%), and *focus on the customer* (8.0%) are almost at the same percentage. Managers of small enterprises give the least importance to *multitasking* (4.4%) and *stress resistance* (1.8%) *(see Fig. 4)*.

Medium-sized enterprises with 25-75 employees, which specialize in a relatively stable product assortment, pay the most attention to *teamwork* (12.4%). *Responsibility* (9.7%) and *focus on development and outcomes* (9.7%) represent the same percentage. *Time management* (8.0%) and *communication skills* (5.3%) are equally important. The minimum percentage is characteristic of *multitasking* (2.7%) and *creativity* (2.7%), whereas *customer care skills* and *stress resistance* are not considered important at all. It can be explained by the specific organization of production and technological processes in mass production industries, where workers perform specific operations and do not need to apply creative and individual approaches.

Mass production industries aim to ensure a permanent, fast and high-quality process of producing a large number of products. Therefore, they pay more attention to professional skills and promptness such as *responsibility* (9.7%), *focus on development and outcomes* (6.2%), *teamwork* (6.2%) and less attention to *time management* (1.8%), *creativity* (1.8%), *communication skills* (0.9%), *stress resistance* (0.9%) and *multitasking* (0.9%). Weak demand for *customer care skills* (0%) reflects the lack of need for this skill in skilled workers in mass production.

The analysis of curricula vitae available on job search websites (www.work.ua, www.hh.ua, www.rabota.ua) indicates garment workers' low awareness of the importance of key competences. Only 16% of the analyzed curricula vitae contain a list of soft skills needed to succeed in the chosen profession *(see Fig. 5)*.

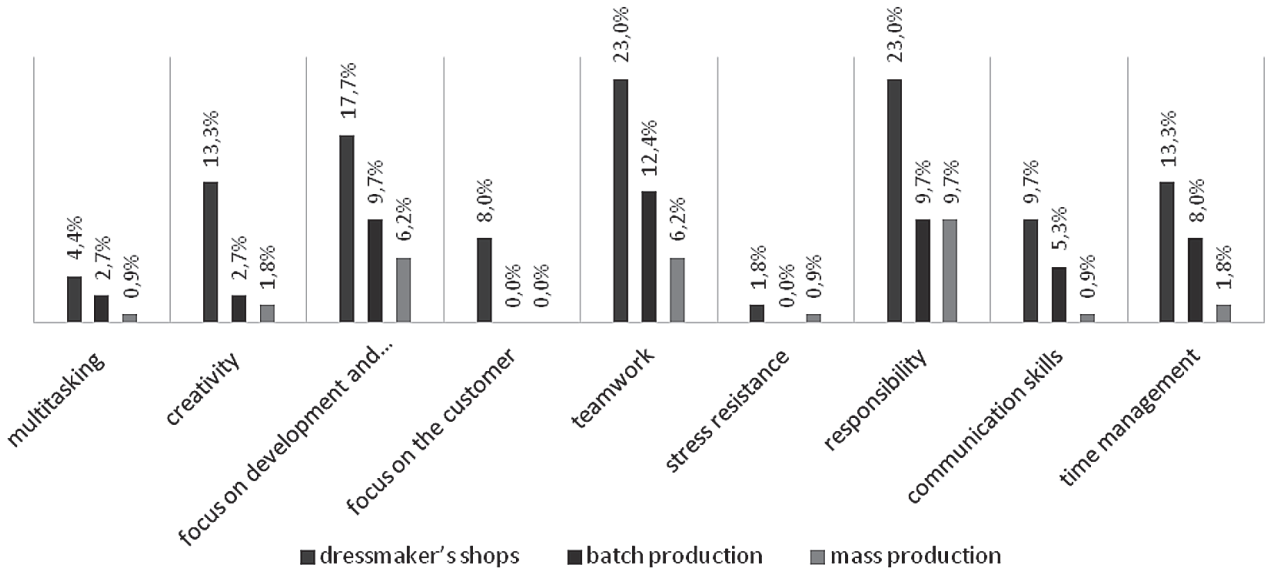

Fig. 4. Comparing the demand for the main key competences by type of production in the labour market (Systematized based on the vacancies available on relevant websites between August, 14 and September, 4, 2019)

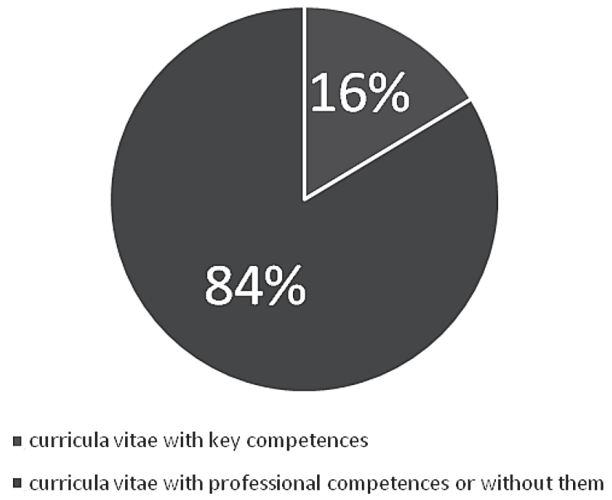

Fig. 5. The offer for workers with well-developed soft skills (Systematized based on the curricula vitae available on relevant websites between September 3 and 4, 2019)

The results of the available offers prove that, in addition to professional skills, applicants have such personal qualities as *responsibility and personal standards* (24.8%), *focus on development* and *outcomes* (20.4%), *focus on the customer* and *communication skills* (15.9%), *time management* (10.6%) and *creativity* (9.7%). Recently, there has been an increase in the offers of *computer literacy* (7.1%). However, it does not appear in the list of qualities demanded by employers of Ukrainian garment enterprises, which is probably explained by lack of digital skills in many employers and their low awareness of the importance of workers' digital culture. Still, the least developed skills among seamstresses, dressmakers and cutters are *multitasking* (3.5%) and *stress resistance* (2.7%) *(see Fig. 6)*.

The study of garment workers' curricula vitae by profession shows that *responsibility* is more characteristic of cutters (13.3%) and less characteristic of dressmakers (7.1%) and seamstresses (4.4%). *Focus on development and outcomes* is equally common for dressmakers and cutters (8.0%). *Focus on the customer* is equally important (for dressmakers – 6.2%, cutters – 8.0%). Communication skills prevail in curricula vitae of dressmakers (8.8%), being slightly less standard for seamstresses (4.4%) and cutters (2.7%). Cutters focus on *creativity* (6.2%) and *time management* (5.3%). *Computer literacy*, as an essential aspect of professional performance and career growth, is characteristic of only 4.4% of dressmakers and 2.7% of cutters. Most importantly, this skill enables garments workers to achieve rapid career advancement, namely from the position of a dressmaker to the position of an operator of cutting tools in batch or mass production industries and an operator of computer-aided design (CAD) software in all types of production.

Emphasizing the demand for computer literacy, job seekers mostly refer to the ability to work with MS Office and CAD software, which helps to automatize the elaboration of technical design documentation required to launch the model into production. *Multitasking* and (seamstresses – 0%, dressmakers, cutters – 1.8%) and stress *resistance* (0.9%) are not given much importance in both curricula vitae and position

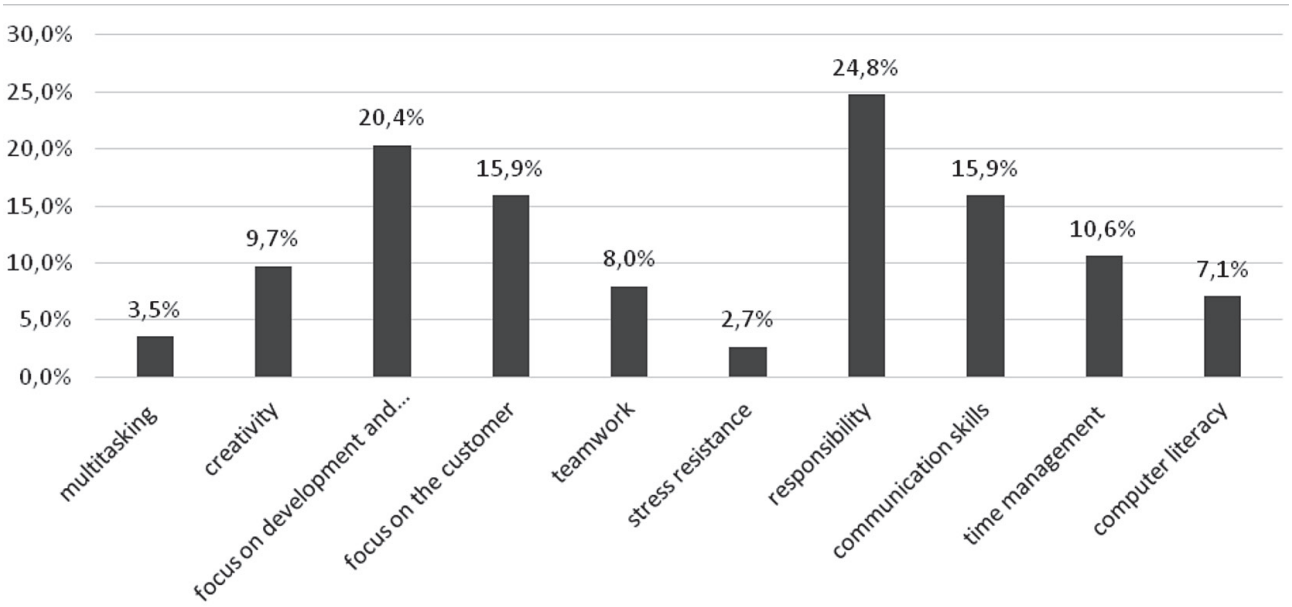

Fig. 6. The offer for the main key competences of garment workers in the labour market (Systematized based on the curricula vitae available on relevant websites between September 3 and 4, 2019)

summaries. This determines the apparent need to raise both employers and skilled workers' awareness of the importance of these skills for the garment industry *(see Fig. 7)*.

The analysis of offers by profession shows that a high percentage of soft skills is characteristic of the dressmakers and cutters, who intend to work in a single production (e.g., in the field of public services). Instead, seamstresses focus on professional skills, which in some way reflect the specific nature of this profession and meet the demand of employers.

The comparison of the offer and demand proves that garment workers cannot adequately meet the needs of employers due to the lack of key competences *(see Fig. 8)*. Thus, it is necessary to take into account the global trends in the awareness of the proportions between hard and soft skills (Yershova, 2019, pp. 165). After all, soft skills are becoming increasingly necessary for a successful social life of the individual, his or her self-realization and career growth.

The paper analyzes 53 vacancies available on international job search websites (www.tyba.com, www.adzuna.co.uk) to study the demand for garment workers with soft skills and determine the requirements placed by employers on these professions abroad.

The analysis of vacancies available on international job search websites shows that 38% of employers place requirements for key competences of future workers *(see Fig. 9)*.

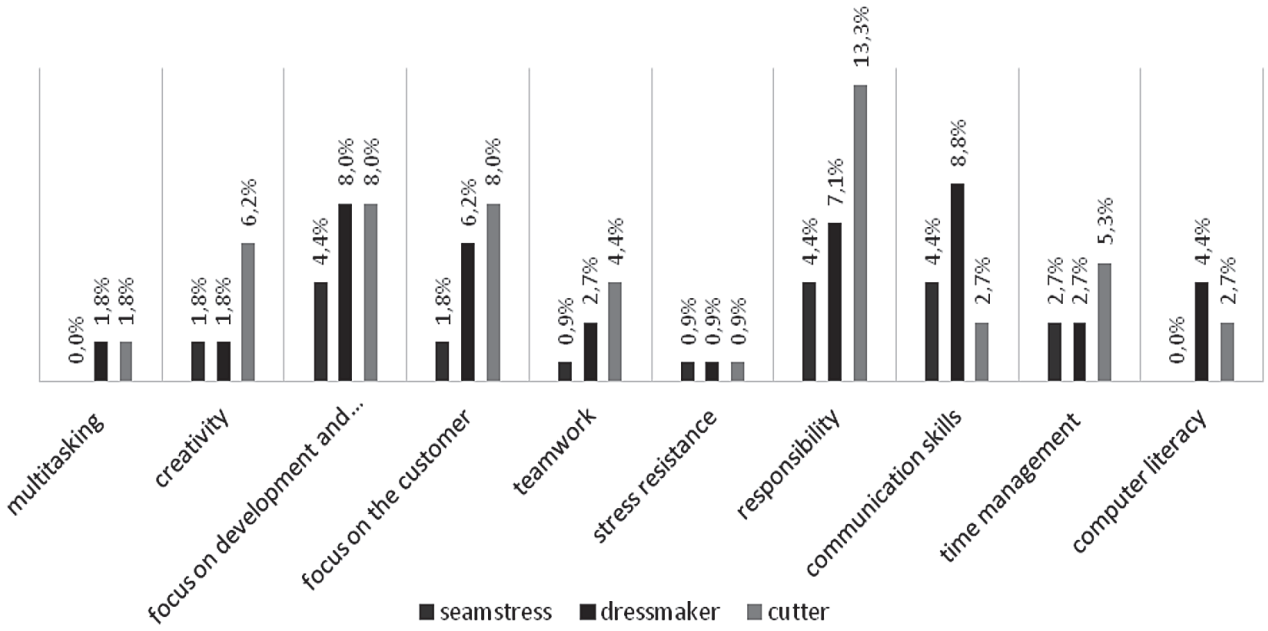

Fig. 7. Comparing the offers for key competences of seamstresses, dressmakers and cutters in the labour market (Systematized based on the curricula vitae available on relevant websites between September 3 and 4, 2019)

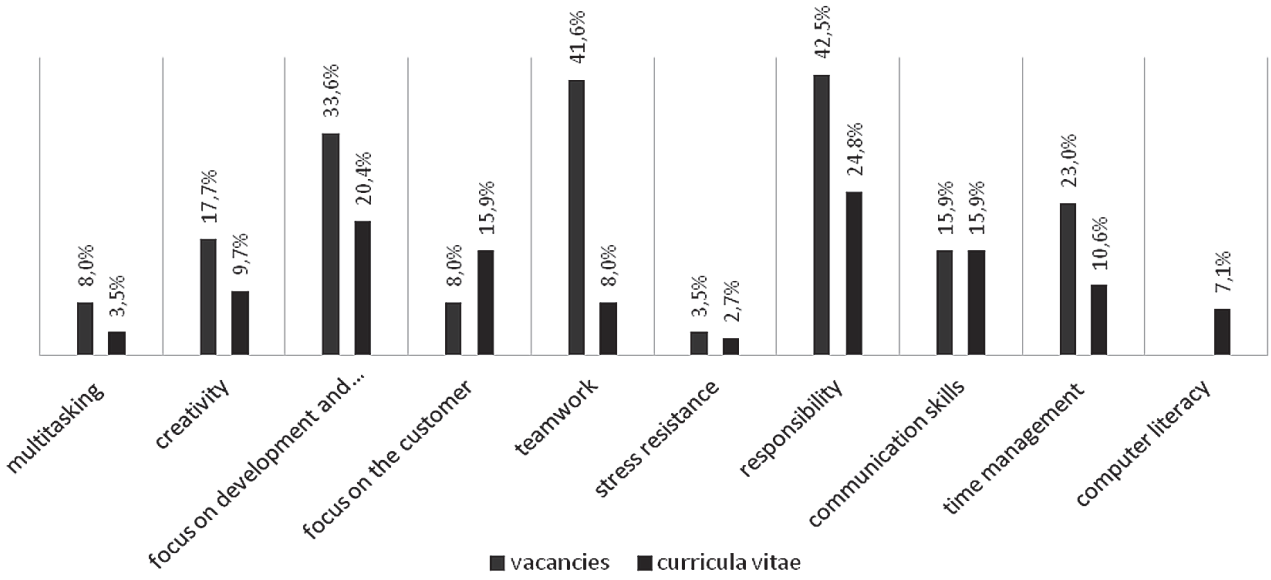

Fig. 8. Comparing the offer and demand for the main key competences of seamstresses, dressmakers and cutters in the labour market (Systematized based on the vacancies and curricula vitae available on relevant websites between August 14 and September 4, 2019)

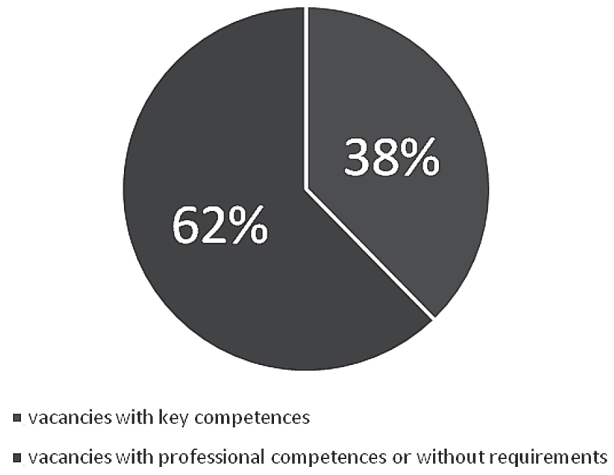

Fig. 9. The demand for workers with soft skills abroad (Systematized based on the vacancies available on international websites between September 6 and 8, 2019)

International employers focus on positive thinking, attention to detail, activity and initiative, rationality. Part of the vacancies offers traineeships to students along with their studies or during holidays, inviting them to assist in the production of collections for small design studios (brands) and world-renowned companies (Hugo Boss, Ralph Lauren, H&M, Levi's). This allows future graduates not only to enhance their professional skills but also to develop soft skills, immersing themselves in a creative atmosphere, working with designers, highly skilled dressmakers and tailors.

Besides, international employers pay much attention to soft skills of future workers, especially *teamwork*. This requirement is contained in 70% of the analyzed vacancies *(see Fig. 10)*.

Responsibility (65%) and *multitasking* (60%) account for almost the same percentage. *Communication skills and focus on development and outcomes* (45%) are equally important. *Creativity* (30%) and *stress resistance* (35%) are found in vacancies for both mass and single production. Employers' requirements for *focus on the customer* (25%), *time management* and *computer literacy* (20%) are also quite significant. In the context of computer literacy, employers highlight not only their ability to work with MS Office but also with Photoshop and Illustrator.

The comparison of the demand of Ukrainian and global labour markets for garment workers with key competences proves that Ukrainian employers of garment enterprises, especially in the field of public services and single production, consider soft skills only as additional qualities of their workers. Position summaries demonstrate the need for workers with such skills as *responsibility* (42.5%), *teamwork* (41.6%), *focus on development, outcomes and learning* (33.6%), *time management* (23.0%), *creativity* (17.7%) and *communication skills* (15.9%). International employers, considering hard and soft skills equally important, are interested in *team-*

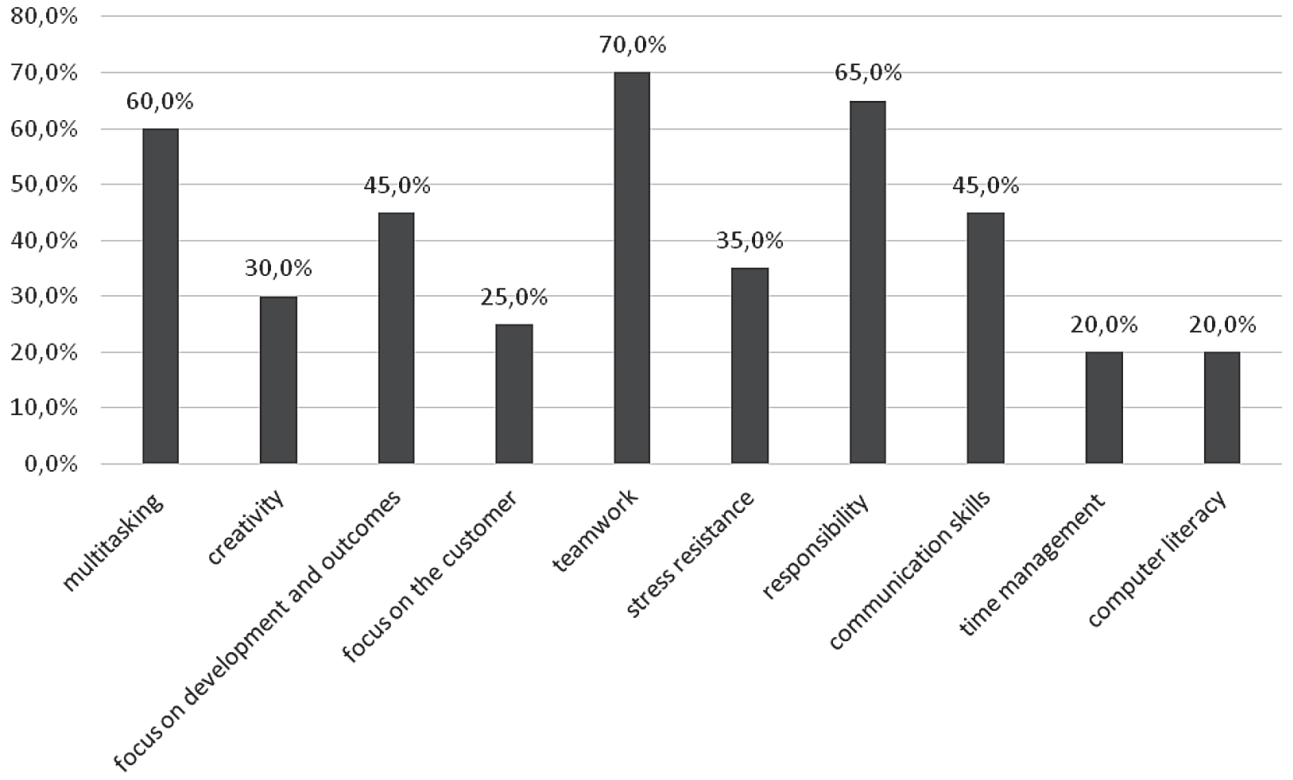

Fig. 10. The demand for soft skills of garment workers in the global labour market (Systematized based on the vacancies available on relevant websites between September 6 and 8, 2019)

work (70.0%), *responsibility* (65.0%), *multitasking* (60.0%), *focus on development and outcomes and communication skills* (45.0%), *stress resistance* (35.0%) and *creativity* (30.0%). *Time management and computer literacy* (20.0%) are also in demand. At the same time, Ukrainian employers are not at all interested in the latter. There is a noticeable difference between the demand of Ukrainian and international employers of garment enterprises for *stress resistance* (Ukraine – 3.5%, abroad – 35.0%) and *multitasking* (Ukraine – 8.0%, abroad – 60.0%). International employers pay far more attention to key skills since they have long been aware of their influence on the versatility and productivity of workers, ensuring the continuity of the working process, improving workers' ability to work at a rapid, intense pace, adequate response to the deadline (Yershov, 2019) *(see Fig. 11)*.

Therefore, the essential objectives of professional education are the following: to train motivated, socially active and responsible workers, who strive for lifelong learning and are ready for professional and personal self-realization and career success.

Conclusions. The article justifies the interdependence between the need for well-developed personal qualities of skilled workers, types of a profession ("seamstress", "dressmaker", "cutter") and types of production. It shows that the most important key skills for seamstresses are responsibility, teamwork, focus on development and outcomes and time management, which ensure the continuity, speed and quality of mass production. The most important key skills for dressmakers are teamwork, responsibility, focus on development and outcomes, time management, creativity and communication skills, which is explained by the opportunity to work in dressmaker's studios, sewing workshops, where they not only perform technological operations on the sewing equipment but directly participate in the organization of production, ordering, communication with cutters or designers. The most important key skills for cutters are teamwork, responsibility, focus on development and outcomes, time management, communication skills, creativity, multitasking, focus on the customer and stress resistance related to the specifics of their work in mass-production industries, as well as in the field of public services.

The paper proves that employers of garment enterprises pay much attention to teamwork, responsibility, personal standards, focus on development and outcomes and time management. It also shows the increasing importance of communication skills, creativity, focus on the customer and multitasking in a single or small-scale production.

These skills are in demand for such professions as "dressmaker" and "cutter" in the field of public services. The demand for professional competences

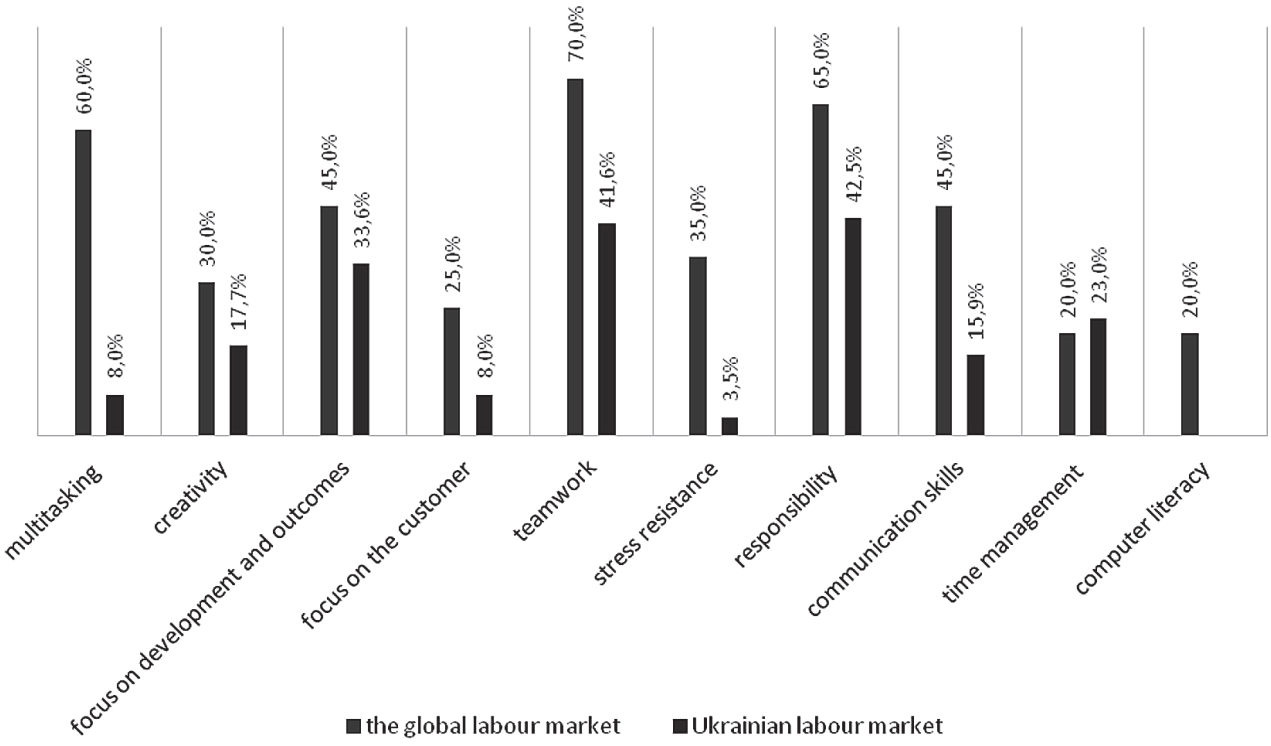

Fig. 11. Comparing the demand for the main soft skills of garment workers in Ukrainian and global labour markets (Systematized based on the vacancies available on relevant websites between August 14 and September 8, 2019)

is stronger than for key competences in batch and mass-production garment industries since garment workers perform specific operations in the technological flow and are not motivated towards self-realization. It explains weak demand for well-developed personal qualities of seamstresses.

The article also reveals the significant percentage difference between the demand for soft skills in the Ukrainian and global labour markets. This is because the term "soft skills", as well as the need to develop key competences, have emerged relatively recently in Ukraine. Currently, transformational changes are underway in the system of requirements for future garment workers in Ukraine.

Further research should focus on studying the causes and ways to increase the attention of Ukrainian employers to the development of key competences in future garment workers.

List of References

Базелюк, О., 2018. Зміст і структура цифрової культури педагогічних працівників закладів професійної освіти. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка,* 16, с. 81-87. https://doi.org/10.32835/2223-5752.2018.16.81-87.

Верховна Рада України. Законодавство України, 2006. *Рекомендація 2006/962/ ЄС Європейського Парламенту та Ради (ЄС) «Про основні компетенції для навчання протягом усього життя».* [online] (Останнє оновлення 18 Грудень 2006) Доступно: <https://zakon.rada.gov.ua/laws/main/994_975> [Дата звернення 24 Листопад 2019].

Єршов, М.-О., 2018. Роль української ІТ-освіти на світовому ринку інформаційних товарів і послуг. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка,* 16, с. 74-81. https://doi.org/10.32835/2223-5752.2018.16.74-81.

Єршова, Л., 2015. Формування референтної особистості як проблема освітньої практики сучасної України. *Вісник Черкаського університету. Серія: Педагогічні науки,* 6, с. 119-124.

Єршова, Л., 2018. Трансформація системи цінностей учнівської і студентської молоді в контексті реформування вітчизняної професійної освіти. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка,* 16, с. 162-168. https://doi.org/10.32835/2223-5752.2018.16.162-168.

Закатнов, Д.О., 2007. Організаційно-педагогічне забезпечення підготовки учнівської молоді до планування кар'єри. *Теоретико-методичні проблеми виховання дітей та учнівської молоді,* 10 (II), с. 373-381.

Закатнов, Д., 2015. Профорієнтаційні засади кар'єрного розвитку учнівської молоді. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка,* 9, с. 86-94.

Кравець, С. Г., 2014. Формування ключових компетентностей у процесі професійної підготовки майбутніх фахівців ресторанного сервісу: результати педагогічного експерименту. *Професійна освіта: проблеми і перспективи,* 6, с. 105-109.

Кравець, С. Г., Кравець, Ю. І., Дерев'янко, Н. П. та Оліферчук, О. Г., 2014. *Педагогічні основи формування змісту підготовки кваліфікованих робітників за інтегрованими професіями: посібник.* Київ: Поліграфсервіс.

Лемешко, Л., 2018. Формування художньо-творчої компетентності техніків– конструкторів одягу як проблема професійної педагогіки. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка,* 16, с. 100-104. https://doi.org/10.32835/2223-5752.2018.16.100-104.

Міністерство освіти і науки України, 2016. *Нова українська школа. Концептуальні засади реформування середньої освіти* [online] (Останнє оновлення 27 Жовтень 2016) Доступно: <https://mon.gov.ua/storage/app/media/zagalna%20seredn ya/nova-ukrainska-shkola-compressed.pdf> (Дата звернення 20 Листопад 2019).

Міністерство освіти і науки України, 2018. *Концепція розвитку педагогічної освіти* [online] (Останнє оновлення 16 Липень 2018) Доступно: <https://mon.gov.ua/ua/npa/pro-zatverdzhennya-koncepciyi-rozvitku-pedagogichnoyi-osviti> [Дата звернення 26 Листопад 2019].

Міністерство освіти і науки. Міністерство соціальної політики, 2016. ДСПТО 7433. *Професія: Кравець.* Київ: Видання офіційне. 72 с.

Міністерство освіти і науки. Міністерство соціальної політики, 2016. ДСПТО 7435. *Професія: Закрійник.* Київ: Видання офіційне. 71 с.

Міністерство освіти і науки. Міністерство соціальної політики, 2016. ДСПТО 7436. *Професія: Швачка*. Київ: Видання офіційне. 89 с.

Овчарук, О. В., ред., 2004. *Компетентнісний підхід у сучасній освіті: світовий досвід та українські перспективи* [Бібліотека з освітньої політики]. Київ: К.І.С.

Однорог, Г., 2018. Теоретичні засади формування ключових компетентностей учнів у закладах професійної освіти засобами інтерактивних технологій. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка,* 16, с. 104-109. https://doi.org/10.32835/2223-5752.2018.16.104-109.

Петренко, Л., 2017. Методи активного навчання: нові можливості дистанційної професійної освіти. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка,* 14, с. 30-36. https://doi.org/10.32835/2223-5752.2017.14.30-36.

Радкевич, О.П., 2015. *Розвиток правової компетентності педагогічних працівників професійно-технічних навчальних закладів*. Київ: ТОВ «НВП Поліграфсервіс».

Романова, Г., 2009. Психолого-педагогічна підготовка як чинник професійної самореалізації викладача економічного університету. *Вісник Львівського університету,* 3(25), с. 167-175.

Середіна, І., 2018. Підприємницька компетентність майбутніх бакалаврів з економіки підприємства як науково-педагогічна проблема. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка,* 16, с. 94-100. https://doi.org/10.32835/2223-5752.2018.16.94-100.

Яблуновська, К., 2018. Теоретичні основи формування екологічної компетентності майбутніх викладачів аграрних закладів вищої освіти. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка,* 15, с. 47-53. https://doi.org/10.32835/2223-5752.2018.15.47-53.

Yershov, M.-O., 2019. Digitalisation of professional (vocational) and pre-high tertiary education of Ukraine: problems and prospects/ Scientific herald of the Institute of vocational education and training of NAES of Ukraine. Professional Pedagogy, 1(18), pp. 67-74. https://doi.org/10.32835/2223-5752.2019.18.67-74.

Translated & Transliterated

Bazeliuk, O., 2018. Zmist i struktura tsyfrovoi kultury pedahohichnykh pratsivnykiv zakladiv profesiinoi osvity [Content and structure of digital culture of VET institutions' teachers]. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPN Ukrainy. Profesiina pedahohika [Scientific herald of the Institute of vocational education and training of NAES of Ukraine. Professional Pedagogy]*, 16, s. 81-87. https://doi.org/10.32835/2223-5752.2018.16.81-87, [in Ukrainian].

Verkhovna Rada Ukrainy. Zakonodavstvo Ukrainy [Verkhovna Rada of Ukraine. Legislation of Ukraine], 2006. *Rekomendatsiia 2006/962/ YeS Yevropeiskoho Parlamentu ta Rady (IeS) «Pro osnovni kompetentsii dlia navchannia protiahom usoho zhyttia» [On the main competences for lifelong learning]*. [online] (Ostannie onovlennia 18 Hruden 2006) Dostupno: <https://zakon.rada.gov.ua/laws/main/994_975> [Data zvernennia 24 Lystopad 2019], [in Ukrainian].

Yershov, M.-O., 2018. Rol ukrainskoi IT-osvity na svitovomu rynku informatsiinykh tovariv i posluh [The role of Ukrainian IT education in the world market of information products and services]. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPN Ukrainy. Profesiina pedahohika [Scientific herald of the Institute of vocational education and training of NAES of Ukraine. Professional Pedagogy],* 16, s. 74-81. https://doi.org/10.32835/2223-5752.2018.16.74-81, [in Ukrainian].

Yershova, L., 2015. Formuvannia referentnoi osobystosti yak problema osvitnoi praktyky suchasnoi Ukrainy [The reference individual formation as a problem of the educational practices in modern Ukraine]. Visnyk Cherkaskoho universytetu. *Seriia: Pedahohichni nauky [Cherkasy university bulletin: Pedagogical sciences]*, 6, s. 119-124, [in Ukrainian].

Yershova, L., 2018. Transformatsiia systemy tsinnostei uchnivskoi i studentskoi molodi v konteksti reformuvannia vitchyznianoi profesiinoi osvity [Scientific herald of the Institute of vocational education and training of NAES Ukraine. Professional Pedagogy]. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPN Ukrainy. Profesiina pedahohika [Scientific herald of the Institute of vocational education and training of NAES of Ukraine. Professional Pedagogy],* 16, s. 162-168. https://doi.org/10.32835/2223-5752.2018.16.162-168, [in Ukrainian].

Zakatnov, D.O., 2007. Orhanizatsiino-pedahohichne zabezpechennia pidhotovky uchnivskoi molodi do planuvannia kariery [Organizational and pedagogical support of training pupils to build a career]. V: T*eoretyko-metodychni problemy vykhovannia ditei ta uchnivskoi molodi: zb. nauk. pr. [Theoretical and methodical problems in character building of children and pupils]*. K.: In-t problem vykhovannia APN Ukrainy, s. 373-380, [in Ukrainian].

Zakatnov, D., 2015. Proforiientatsiini zasady kariernoho rozvytku uchnivskoi molodi [Professional orientation and proforientologic competences concerning vocational self-determination and career development of young students]. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPS Ukrainy. Profesiina pedahohika [Scientific herald of the Institute of vocational education and training of NAES of Ukraine. Professional Pedagogy],* 9, s. 86-94, [in Ukrainian].

Kravets, S. H., 2014. Formuvannia kliuchovykh kompetentnostei u protsesi profesiinoi pidhotovky maibutnikh fakhivtsiv restorannoho servisu: rezultaty pedahohichnoho eksperymentu [Key competencies in the training of future specialists restaurant service results pedagogical experiment]. *Profesiina osvita: problemy i perspektyvy [Vocational education: Problems and Prospects],* 6, s. 105-109, [in Ukrainian].

Kravets, S. H., Kravets, Yu. I., Derevianko, N. P. ta Oliferchuk, O. H., 2014. *Pedahohichni osnovy formuvannia zmistu pidhotovky kvalifikovanykh robitnykiv za intehrovanymy profesiiamy: posibnyk [The Pedagogical Principles of Building the Content of Training of Skilled Workers for Integrated Professions: a Textbook]*. Kyiv: Polihrafservis, [in Ukrainian].

Lemeshko, L., 2018. Formuvannia khudozhno-tvorchoi kompetentnosti tekhnikiv– konstruktoriv odiahu yak problema profesiinoi pedahohiky [Forming clothes technicians-constructors' arts-creative competence as a professional pedagogy problem]. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPN Ukrainy. Profesiina pedahohika [Scientific herald of the Institute of vocational education and training of NAES of Ukraine. Professional Pedagogy],* 16, s. 100-104. https://doi.org/10.32835/2223-5752.2018.16.100-104, [in Ukrainian].

Ministerstvo osvity i nauky Ukrainy [Ministry of Education and Science of Ukraine], 2016. *Nova ukrainska shkola. Kontseptualni zasady reformuvannia serednoi osvity [The New Ukrainian School. Conceptual Principles of secondary school reform]* [online] (Ostannie onovlennia 27 Zhovten 2016) Dostupno: <https://mon.gov.ua/storage/app/media/zagalna%20serednya/nova-ukrainska-shkola-compressed.pdf> (Data zvernennia 20 Lystopad 2019), [in Ukrainian].

Ministerstvo osvity i nauky Ukrainy [Ministry of Education and Science of Ukraine], 2018. *Kontseptsiia rozvytku pedahohichnoi osvity [The concept of teacher education development]* [online] (Ostannie onovlennia 16 Lypen 2018) Dostupno: <https://mon.gov.ua/ua/npa/pro-zatverdzhennya-koncepciyi-rozvitku-pedagogichnoyi-osviti> [Data zvernennia 26 Lystopad 2019], [in Ukrainian].

Ministerstvo osvity i nauky. Ministerstvo sotsialnoi polityky [The Ministry of Education and Science of Ukraine. The Ministry of Social Policy of Ukraine], 2016. DSPTO 7433. *Profesiia: Kravets [Profession: Dressmaker]*. Kyiv: Vydannia ofitsiine. 72 s., [in Ukrainian].

Ministerstvo osvity i nauky. Ministerstvo sotsialnoi polityky [The Ministry of Education and Science of Ukraine. The Ministry of Social Policy of Ukraine], 2016. DSPTO 7435. *Profesiia: Zakriinyk [Profession: Cutter]*. Kyiv: Vydannia ofitsiine. 71 s., [in Ukrainian].

Ministerstvo osvity i nauky. Ministerstvo sotsialnoi polityky [The Ministry of Education and Science of Ukraine. The Ministry of Social Policy of Ukraine], 2016. DSPTO 7436. *Profesiia: Shvachka [Profession: Seamstress]*. Kyiv: Vydannia ofitsiine. 89 s., [in Ukrainian].

Ovcharuk, O. V., red., 2004. *Kompetentnisnyi pidkhid u suchasnii osviti: svitovyi dosvid ta ukrainski perspektyvy [Biblioteka z osvitnoi polityky]*. Kyiv: K.I.S, [in Ukrainian].

Odnoroh, H., 2018. Teoretychni zasady formuvannia kliuchovykh kompetentnostei uchniv u zakladakh profesiinoi osvity zasobamy interaktyvnykh tekhnolohii [Theoretical principles of *development of the key competences of students at the vocational schools with the help of interactive technologies]. Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPN Ukrainy. Profesiina pedahohika [Scientific herald of the Institute of vocational education and training of NAES of Ukraine. Professional Pedagogy],* 16, s. 104-109. https://doi.org/10.32835/2223-5752.2018.16.104-109, [in Ukrainian].

Petrenko, L., 2017. Metody aktyvnoho navchannia: novi mozhlyvosti dystantsiinoi profesiinoi osvity [Methods of active learning: new opportunities for distance vocational education]. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPN Ukrainy. Profesiina pedahohika [Scientific herald of the Institute of vocational education and training of NAES of Ukraine. Professional Pedagogy],* 14, s. 30-36. https://doi.org/10.32835/2223-5752.2017.14.30-36, [in Ukrainian].

Radkevych, O.P., 2015. *Rozvytok pravovoi kompetentnosti pedahohichnykh pratsivnykiv profesiino-tekhnichnykh navchalnykh zakladiv [Development of legal competence of teaching staff of vocational schools]*. Kyiv: TOV «NVP Polihrafservis», [in Ukrainian].

Romanova, H., 2009. Psykholoho-pedahohichna pidhotovka yak chynnyk profesiinoi samorealizatsii vykladacha ekonomichnoho universytetu [Psycho-pedagogical training as a factor in professional self-realization of lecturers at universities of economics]. *Visnyk Lvivskoho universytetu [Herald of Lviv University]*, 3(25), s. 167-175, [in Ukrainian].

Seredina, I., 2018. Pidpryiemnytska kompetentnist maibutnikh bakalavriv z ekonomiky pidpryiemstva yak naukovo-pedahohichna problema [Entrepreneurship competence of future bachelors of the business economy as a scientific and pedagogical problem]. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPN Ukrainy. Profesiina pedahohika [Scientific herald of the Institute of vocational education and training of NAES Ukraine. Professional Pedagogy],* 16, s. 94-100. https://doi.org/10.32835/2223-5752.2018.16.94-100, [in Ukrainian].

Yablunovska, K., 2018. Teoretychni osnovy formuvannia ekolohichnoi kompetentnosti maibutnikh vykladachiv ahrarnykh zakladiv vyshchoi osvity [Theoretical bases of forming the ecological competence of the agrarian higher education institutions' future academic staff]. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPN Ukrainy. Profesiina pedahohika [Scientific herald of the Institute of vocational education and training of NAES of Ukraine. Professional Pedagogy]*, 15, s. 47-53. https://doi.org/10.32835/2223-5752.2018.15.47-53, [in Ukrainian].

Yershov, M.-O., 2019. Digitalisation of professional (vocational) and pre-high tertiary education of Ukraine: problems and prospects. *Scientific herald of the Institute of vocational education and training of NAES of Ukraine. Professional Pedagogy,* 1(18), pp. 67-74. https://doi.org/10.32835/2223-5752.2019.18.67-74, [in English].

УДК 377.3:687]:005.336.2-027.561:331.5

Ключові компетентності майбутніх кваліфікованих робітників швейного профілю: попит і пропозиція на ринку праці

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Реферат.

Актуальність. Державні стандарти професійної (професійно-технічної) освіти професій "швачка", "кравець", "закрійник" розкривають зміст професійних базових компетентностей даних професій, а також мають перелік загальних (ключових) компетентностей, спільних для всіх трьох професій. Це зумовило необхідність визначення для кожної професії окремого переліку ключових компетентностей, затребуваних роботодавцями швейних підприємств.

Мета: аналіз, порівняння й узагальнення попиту і пропозицій ключових компетентностей кваліфікованих робітників швейного профілю на вітчизняному ринку праці; визначення особистісних якостей, затребуваних сучасними керівниками вітчизняних швейних підприємств для професій "швачка", "кравець", "закрійник"

Методи: для визначення рівня потреби роботодавців швейної промисловості України у кваліфікованих робітниках з розвиненими ключовими компетентностями (далі – КК) було здійснено аналіз, порівняння та узагальнення 270 вакансій і 344 резюме, розміщених на вітчизняних і зарубіжних сайтах пошуку роботи (www.work.ua, www.hh.ua, www.rabota.ua).

Результати. Статистично проілюстровано потребу керівників українських швейних підприємств у швачках, кравцях та закрійниках зі сформованими ключовими компетентностями. Виконано порівняння попиту та пропозиції м'яких навичок робітників різних напрямів швейної промисловості, яке засвідчує той факт, що кваліфіковані робітники швейного профілю нездатні на сьогодні повністю задовольнити потреби роботодавців через недостатній рівень формування ключових компетентностей. Виявлено, що більш затребуваними робітниками із сформованими ключовими компетентностями є кравці та закрійники, які мають працювати у сфері побутового обслуговування населення або в одиночному виробництві. З'ясовано причини низького рівня попиту на розвинені особистісні якості для професії "швачка". Представлено порівняння попиту вітчизняного та світового ринків праці на гнучкі

навички робітників швейної галузі, яке свідчить, що іноземні роботодавці надають вагомого значення розвиненим soft skills, усвідомлюючи їх важливість, а в Україні цей процес перебуває у стані формування.

Висновки: доведено існування взаємозалежності між потребою у розвинених особистісних якостях кваліфікованих робітників, видом професії і типом виробництва; відображено роль ключових компетентностей кваліфікованих робітників швейного профілю у формуванні особистісних якостей, затребуваних сучасними керівниками вітчизняних швейних підприємств для професій "швачка", "кравець", "закрійник", а також взаємозв'язок між ключовими і професійними компетентностями.

Ключові слова: *ключові компетентності, професійні компетентності, швейна галузь, кваліфікований робітник, професії "кравець", "закрійник", "швачка".*

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THE ESSENCE OF ARTISTIC AND CREATIVE COMPETENCE OF CLOTHING TECHNICAL DESIGNERS

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Abstract.

The relevance of the paper lies in the need of garment manufacture in highly qualified technical designers, who can apply their artistic, creative and art skills in practice and have knowledge not only about design, clothing technology but also about artistic courses aimed at developing artistic and creative competence.

The paper *aims* to study the components of artistic and creative competence of clothing technical designers in the scientific literature and analyze the essence of this competence.

Methods: a classic analysis of psycho-pedagogical, scientific and methodological literature, legal acts and documents, educational and methodical documents and proceedings of conferences to generalize conceptual approaches to solving the problem under study to reveal the essence of artistic and creative competence of clothing technical designers; generalization – to integrate and group different classifications of artistic and creative competence into an integral unity, which manifests itself in the ability of the individual to work effectively in the professional field to formulate relevant conclusions.

Results. The paper studies and reveals the components of artistic and creative competence of clothing technical designers. Also, it contains a theoretical analysis of recent publications on the study of artistic, creative, as well as artistic and creative competences. The paper shows that artistic and creative competence plays a leading role in the structure of the professional competence of students majoring in Light Industry Technologies. Modelling and Design of Industrial Products (specialty No 182). This competence combines artistic and creative competence, which is a complex characteristic of a clothing technical designer, who can perform artistic tasks at the creative level. The paper describes both creative and artistic competences. It justifies the categorical essence of artistic and creative competence of clothing technical designers in the context of artistic creativity, artistic taste, artistic and creative activity, artistic and creative process. It highlights different interpretations of the experience in developing artistic and creative competence in clothing technical designers at colleges in modern educational literature. It proves the importance to improve the professional training of garment workers through focusing on the development of artistic and creative competence in clothing technical designers.

Conclusions: every type of competences plays a particular role in the professional development of specialists. The competences related to the specifics of artistic and creative activities are incredibly essential for future clothing technical designers. Artistic and creative competence plays an essential role in the general structure of multidimensional professional competence of future clothing technical designers and is rather multidisciplinary. It is vital to the structure of professional competences for the specialty No 182 "Light Industry Technologies. Modelling and Design of Industrial Products" of the qualification "Technical Designer" and combines artistic and creative competences.

Keywords: *artistic and creative competence, artistic competence, creative competence, technical designer, college.*

Introduction. The main objectives on the path to the innovative, European development of Ukrainian society are modernization, reforms in higher education, creation of a socially mature creative personality based on moral, spiritual and cultural development, defined in the National Strategy for the Development of Education in Ukraine until 2021, and enhancement of the role of higher education in training the educated young generation.

The modern labour market is changing and developing. There is a growing demand for top-level clothing designers and technologists who can design and produce high-quality clothing, including sketching a model, know about the latest fashions and know how to introduce new technologies of artistic design and decorative styling, design intricate and fashionable models of clothing from various materials. Such specialists should know about design, clothing technologies and art courses, aimed at developing artistic and creative competence in future clothing technical designers. They should be able to fully realize their artistic, creative and artistic abilities in professional activities (Radkevych, 2016; Zakatnov, 2007; 2015; Yershova, 2015).

Sources. Many researchers have addressed the issue of creative, artistic, artistic and creative competences. According to T. Turchyn (2015), the term "artistic competence" implies creativity in various types of artistic activities, as well as the ability to solve tasks related to artistic analysis and interpretation of works of art by areas, types and genres. V. Falko and S. Lozynska (2018) consider artistic competence of designers as one's ability to develop aesthetic, analytical and practical attitudes towards artistic and art values of fine art works. They also believe that imaginative creativity is an essential component of design. L. Masol (2010) justifies artistic competence in the context of one's ability to self-organize in the field of artistic activity based on axiological aesthetic persuasions, as well as a particular experience in the art world and one's desire to develop artistic and creative resources. According to the scholar, this term is integrative and personality-oriented since it is a versatile indicator of the effectiveness of art education and self-study, combining the following components: creative, self-fulfilling (active), content-related (knowledge), procedural (ability), axiological (values, orientations) (Masol, 2010). Such a wide range of components enables the individual, using artistic competence, to perform artistic tasks within different types of art (visual, synthetic, temporal). Thus, art and artistic competences are identical. One can also use such terms as "multi-artistic" or "multi-art competences". However, artistic competence is divided into substantive competences in the classification of the scholars mentioned above, namely, visual, synthetic and temporal forms of art, which can imply this competence. Besides, garment workers should be able to deal with graphic, pictorial art, shapes, colours, models and projects.

S. Yalanska (2014) analyzes a general psychological aspect of creative competence. She believes this concept is the highest level of professional development when the specialist focuses on creativity, which is productive and continuous. It allows one to generate ideas, hypothesize, think associatively, see contradictions, transfer knowledge and skills to new situations, overcome inertia and critical thinking.

O. Semenova (2016) defines the essence of artistic and creative competence as the ability to enrich one's artistic experience, develop aesthetic taste and special skills. She notes that a solid foundation for achieving artistic and pedagogical professionalism implies improving skills in artistic form-making by compositional means, updating technical knowledge about active production of original content and valuable works.

The paper analyzes the concept of art education development, the decree of the Cabinet of Ministers of Ukraine, the field standard of higher education for the specialty No 182 "Light Industry Technologies. Modelling and Design of Industrial Products".

The paper **aims** to reveal the essence and study the components of artistic and creative competence of clothing technical designers based on the analysis of the scientific literature.

Methods: a classic analysis of psycho-pedagogical, scientific and methodological literature, legal acts and documents, educational and methodical documents and proceedings of conferences to generalize conceptual approaches to solving the problem under study to reveal the essence of artistic and creative competence of clothing technical designers; generalization – to integrate and group different classifications of artistic and creative competence into an integral unity, which manifests itself in the ability of the individual to work effectively in the professional field to formulate relevant conclusions.

Results and discussion. In simple terms, the profession of design technician is somewhat similar to that of designer. The primary specifics of such specialists' training lies in preparing specialists who have the relevant knowledge, flexible thinking, apply a creative approach to solving urgent problems and have excellent organizational, managerial and research skills. It should combine the activities of fashion designers, designers, technologists and clothing designers who perform many functions. Designers have such qualities as erudition, curiosity, rationality and analytical thinking. They are masters of their

craft, who can realize their professional skills in any field due to artistic and creative competence (Fursa, & Orlov, 2016).

Artistic and creative competence takes its place in the structure of professional competence. Field standards of higher education of Ukraine contain some qualification characteristic of the specialty No 182 "Light Industry Technologies. Modelling and Design of Industrial Products" of the qualification "Technical Designer", which includes the following competences in the structure of future specialists' competences: integral, general, professional. It also covers the competences which are required for graduates *(see Fig. 1)*.

According to A. Soloveva (2010), professional competence is based on general professional and specific professional competences, which are represented by certain types of activity (artistic, creative, project, information, communicative, production, organizational, managerial, research, pedagogical, consulting).

Artistic and creative competence combines artistic and creative competence, which is a complex characteristic of clothing technical designers, who can perform artistic tasks at the creative level. Such specialists cannot achieve a high level of creative competence without the knowledge of fine arts developed through artistic competence.

The following components characterize a high level of students' artistic competence:

– understanding of the basics of fine arts;

– knowledge about the classification of types of art, types of visual art, as well as the specifics of the fine arts (types, genres, means);

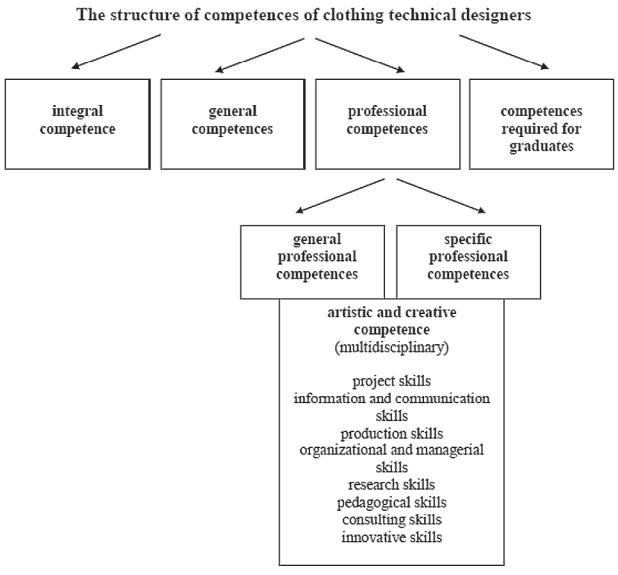

Fig. 1. The structure of competences of clothing technical designers

– knowledge about the links of visual art with other arts, natural and cultural activities of the individual;

– ability to conduct an artistic analysis of works of art based on professional knowledge and reveal the features of their artistic language;

– knowledge of techniques and technologies required to complete graphic works and paintings;

– knowledge of the content and goals of academic and creative tasks (drawings, paintings, artistic design of clothing);

– understanding of methods for developing creative skills in the process of studying fine arts;

– knowledge of the structure of composite objects;

– knowledge of stylization and transformation techniques;

– ability to use tools and apply composition techniques, rules and prospects;

– ability to enrich one's visual experience, develop aesthetic taste and special skills;

– ability to conduct experimental studies of artistic and creative nature, use the latest artistic technologies in professional activities, improve one's professional skills and artistic ethics.

The characteristics of creative competence of clothing technical designers consists of the following stages:

Stage 1 (preparation) – ability to generate ideas, hypothesize, that is, a creative process, consisting of such steps as a systematic familiarization with the problem; inspiration, the origination of ideas, a work of imagination; insight; decision-making and willingness to implement creative ideas.

Stage 2 is caused by the skills in using the language of fine arts.

The categorical essence of artistic and creative competence of clothing technical designers should be considered in the context of artistic creativity, artistic taste, artistic and creative activity, artistic and creative process.

Artistic creativity is usually viewed as a process of a spiritual and practical embodiment of an artistic idea into artistic images of subject-related and sensual nature in the educational literature on aesthetics. A general focus of artistic creativity lies in achieving the most correspondence between a creative artistic idea and its adequate application in visual language. Thus, it is the generalization process in the art world of images that have emerged in the imagination, acquired a distinct vital perfection and inner necessity within the work as the integrity of the artistic idea and its figurative life (Movchan, 2017). Therefore, the essence of artistic creativity is an activity, process and product. The realization of artistic and creative activity helps to develop social significance, self-confidence and a conscious attitude towards reality. The knowledge and

skills acquired in the process of artistic creativity can be transferred to social, labour, educational spheres, life and communication and aesthetics.

According to O. Ivanenko (2015), artistic activity is a particular form of qualitative transition from the known to the unknown in the artistic sphere. It is always expressed through an artistic, figurative language, is full of attractive power and bright, positive emotions. It introduces reality in a rather specific way, which, in turn, is determined by the characteristic qualities of certain life phenomena and circumstances. In other words, it is an artistic and creative process of visual representation of life phenomena and events.

The realities of life are the driving force of every artist's artistic and creative process. An artistic idea does not depend on one fact, even if it is mighty and fascinating. The artist analyzes, generalizes the concrete phenomenon and distinguishes it from similar ones, thus prioritizing artistic ideas. Thorough preparation reinforced by daily fruitful work is the driving force behind the achievement of expected results. It is the highest manifestation of artistic embodiment. The components of the complex artistic and creative process are perception, in the course of which an object or phenomenon is studied, a creative concept or development of an artistic image in the mind of the artist, practical work to create a work in the selected material.

Artistic taste and aesthetic ideal are students' skills responsible for their aesthetic education. It is the aesthetic ideal as intellectually emotional holistic views of the individual on perfection, a desirable future, which combines judgment or a system of views. It is the goal that encourages young people to action. The ideal reflects the unity of the sensual and the rational, the emotional and the intellectual.

The process of developing artistic taste and nurturing aesthetic ideal occurs along with the emergence of an aesthetic need for a subjective form of perception. The aesthetic need is understood as a structural mental characteristic, a form of activity, which relates to the individual as a whole and the mechanisms of influence of social and mental conditions on him or her.

Artistic and creative activity is the need for internal illumination of one's own emotions and experiences during creative activity. Creativity is considered through the following three aspects: a set of qualities, in which the inner emotional attitude to the world and oneself manifests itself, a way of self-expression; a specific action, which reflects higher levels of activity; activity is realized in the process of the individual's interaction with the environment in the activity and is a reflection of that interaction.

Conclusions. Every type of competences plays a specific role in the professional development of specialists. The competences related to the specifics of artistic and creative activities should be essential for future clothing technical designers. Therefore, artistic and creative competence plays an essential role in the general structure of multidimensional professional competence of future clothing technical designers and is rather multidisciplinary. It is essential to the structure of professional competences for the specialty No 182 "Light Industry Technologies. Modelling and Design of Industrial Products" of the qualification "Technical Designer" and combines artistic and creative competences.

List of references

Галузевий стандарт вищої освіти, 2015. *0516 Текстильна та легка промисловість 18 Виробництво та технології 182 Технології легкої промисловості 5. 05160203 моделювання та конструювання промислових виробів.* Київ: Міністерство освіти і науки України. [online] (Останнє оновлення 24 Квітень 2019) Доступно: https://mon.gov.ua/storage/app/media/vishcha-osvita/zatverdzeni%20standarty/2019/04/25/182-tekhnologii-legkoi-promislovosti-bakalavr.pdf [Дата звернення 11 Жовтень 2019].

Єршова, Л., 2015. Формування референтної особистості як проблема освітньої практики сучасної України. *Вісник Черкаського університету. Серія: Педагогічні науки*, 6, с. 119-124.

Єршова, Л., 2018. Трансформація системи цінностей учнівської і студентської молоді в контексті реформування вітчизняної професійної освіти. Н*ауковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка,* 16, с. 162-168. DOI: http://doi.org/10.32835/2223-5752.2018.16.162-168.

Закатнов, Д.О., 2007. Організаційно-педагогічне забезпечення підготовки учнівської молоді до планування кар'єри. *Теоретико-методичні проблеми виховання дітей та учнівської молоді*, 10 (II), с. 373-381.

Закатнов, Д., 2015. Профорієнтаційні засади кар'єрного розвитку учнівської молоді. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка*, 9, с. 86-94.

Іваненко, О., 2015. Особливості художньо-творчої діяльності учнів шкіл мистецтв на інтеграційних засадах. *Вісник Інституту розвитку дитини*, 37, с. 65-70.

Кудренко, Д., 2017. Дидактичні умови формування художньо-графічних компетентностей студентів мистецьких спеціальностей. *Херсон: КВНЗ «Херсонська академія неперервної освіти»*.

Лемешко, Л., 2018. Формування художньо-творчої компетентності техніків-конструкторів одягу як проблема професійної педагогіки. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка,* 16, с. 100-104.

Лозинська С. та Фалько В., 2018. Теоретичні основи дослідження розвитку креативності дошкільників як осо-

бистісної здатності до творчості. *Молодий вчений,* 8, с. 162-165.

Масол, Л., 2010. Художня культура. 10 клас: Тематичні розробки уроків. Рівень стандарту. Академічний рівень. *Х.: Вид-во «Ранок».*

Мовчан, В., 2011. Естетика: навчальний посібник для вузів. *Київ: Знання,* с.527.

Однорог, Г., 2018. Теоретичні засади формування ключових компетентностей учнів у закладах професійної освіти засобами інтерактивних технологій. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка,* 16, с. 104-108. https://doi.org/10.32835/2223-5752.2018.16.104-108.

Радкевич, В., 2016. Теоретичні та методичні засади розвитку професійної освіти і навчання: результати, проблеми, перспективи. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка,* 11, с. 5-22.

Семенова, Г., 2016. Педагогічні умови формування художньо-творчої компетентності майбутнього вчителя образотворчого мистецтва. *Молодь і ринок,* 8, с. 160-164.

Середіна, І., 2018. Підприємницька компетентність майбутніх бакалаврів з економіки підприємництва як науково-педагогічна проблема. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка,* 16, с. 94-96.

Соловьева, А., 2010. *Формирование профессиональной компетентности будущих дизайнеров в негосударственных ВУЗах:* автореферат. *Кандидат наук. Учреждение российской академии образования «Институт содержания и методов обучения».*

Турчин, Т.М., 2015. *Педагогіка мистецтва:* навчально-методичний посібник. Чернігів: Видавець Лозовий В., 92 с.

Верховна Рада України. Законодавство України, 2013. *Указ Президента України «Про Національну стратегію розвитку освіти в Україні на період до 2021 року»*. [online] (Останнє оновлення 25 Червень 2013) Доступно: <http://nbuv.gov.ua/UJRN/gsuk_2013_8-9_6> [Дата звернення 11 Травень 2019].

Фурса, О. та Орлов, В., 2016. Проблеми проектування професійної кар'єри майбутніх фахівців із дизайну. *Мистецька освіта: зміст, технології, менеджмент,* 11, с. 5-17.

Яланська, С., 2012. Творча компетентність педагога як умова ефективності професійної діяльності. *Естетика і етика педагогічної дії*, 4, с. 74-85.

Translated & Transliterated

Haluzevyi standart vyshchoi osvity [Industry standard of higher education], 2015. *0516 Tekstylna ta lehka promyslovist 18 Vyrobnytstvo ta tekhnolohii. 182 Tekhnolohii lehkoi promyslovosti. 5. 05160203 modeliuvannia ta konstruiuvannia promyslovykh vyrobiv [0516 Textile and light industry. 18 Manufacturing and technology. 182 Light industry technology. 5. 05160203 Modeling and construction of industrial products.]*. Kyiv: Ministerstvo osvity i nauky Ukrainy. [online] (Ostannie onovlennia 24 Kviten 2019) Dostupno: https://mon.gov.ua/storage/app/media/vishcha-osvita/zatverdzeni%20standarty/2019/04/25/182-tekhnologii-legkoi-promislovosti-bakalavr.pdf [Data zvernennia 11 Zhovten 2019], [in Ukrainian].

Yershova, L., 2015. Formuvannia referentnoi osobystosti yak problema osvitnoi praktyky suchasnoi Ukrainy [The reference individual formation as a problem of the educational practices in modern Ukraine]. *Visnyk Cherkaskoho universytetu. Seriia: Pedahohichni nauky [Cherkasy university bulletin: Pedagogical sciences],* 6, s. 119-124, [in Ukrainian].

Yershova, L., 2018. Transformatsiia systemy tsinnostei uchnivskoi i studentskoi molodi v konteksti reformuvannia vitchyznianoi profesiinoi osvity [Transformation of the students' values system in the context of domestic vocational education and training reforming]. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPS Ukrainy. Profesiina pedahohika [Scientific herald of the Institute of vocational education and training of NAES of Ukraine. Professional Pedagogy],* 16, s. 162-168. DOI: http://doi.org/10.32835/2223-5752.2018.16.162-168, [in Ukrainian].

Zakatnov, D.O., 2007. Orhanizatsiino-pedahohichne zabezpechennia pidhotovky uchnivskoi molodi do planuvannia kariery [Organizational and pedagogical support of training pupils to build a career]. V: *Teoretyko-metodychni problemy vykhovannia ditei ta uchnivskoi molodi: zb. nauk. pr. [Theoretical and methodical problems in character building of children and pupils]*. K.: In-t problem vykhovannia APN Ukrainy, s. 373-380, [in Ukrainian].

Zakatnov, D., 2015. Proforiientatsiini zasady kariernoho rozvytku uchnivskoi molodi [Professional orientation and proforientologic competences concerning vocational self-determination and career development of young students]. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPS Ukrainy. Profesiina pedahohika [Scientific herald of the Institute of vocational education and training of NAES of Ukraine. Professional Pedagogy],* 9, s. 86-94, [in Ukrainian].

Ivanenko, O., 2015. Osoblyvosti khudozhno-tvorchoi diialnosti uchniv shkil mystetstv na intehratsiinykh zasadakh [Features of artistic and creative activity of students of arts schools on integration grounds]. *Visnyk Instytutu rozvytku dytyny [Bulletin of the Institute for Child Development],* 37, s. 65-70, [in Ukrainian].

Kudrenko, D., 2017. *Dydaktychni umovy formuvannia khudozhno-hrafichnykh kompetentnostei studentiv mystetskykh spetsialnostei [Didactic conditions for forming artistic and graphic competences of students of artistic specialties]*. Kherson: KVNZ «Khersonska akademiia neperervnoi osvity», [in Ukrainian].

Lemeshko, L., 2018. Formuvannia khudozhno-tvorchoi kompetentnosti tekhnikiv-konstruktoriv odiahu yak problema profesiinoi pedahohiky [Forming clothes technicians-constructors' arts– creative competence as a professional pedagogy problem]. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPN Ukrainy. Profesiina pedahohika [Scientific herald of the Institute of vocational education and training of NAES of Ukraine. Professional Pedagogy],* 16, s. 100-104. https://doi.org/10.32835/2223-5752.2018.16.100-104, [in Ukrainian].

Lozynska, S. ta Falko, V., 2018. Teoretychni osnovy doslidzhennia rozvytku kreatyvnosti doshkilnykiv yak osobystisnoi zdatnosti do tvorchosti [Theoretical bases of research of development of creativity of preschool children as personal ability to creativity]. *Molodyi vchenyi [Young Scientist],* 8, s. 162-165. http://nbuv.gov.ua/UJRN/molv_2018_8%281%29__38, [in Ukrainian].

Masol, L., 2010. *Khudozhnia kultura. 10 klas: Tematychni rozrobky urokiv. Riven standartu. Akademichnyi riven [Art culture. Grade 10: Thematic development of lessons. The standard level. Academic level]*. Kh.: Vyd-vo «Ranok», [in Ukrainian].

Movchan, V., 2011. *Estetyka: navchalnyi posibnyk dlia vuziv[Aesthetics: a textbook for universities]*. Kyiv: Znannia, s.527, [in Ukrainian].

Odnoroh, H., 2018. Teoretychni zasady formuvannia kliuchovykh kompetentnostei uchniv u zakladakh profesiinoi osvity zasobamy interaktyvnykh tekhnolohii [The essence and structure of key competencies of future skilled sewing workers]. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPN Ukrainy. Profesiina pedahohika [Scientific herald of the Institute of vocational education and training of NAES of Ukraine. Professional Pedagogy],* 16, s. 104-108. https://doi.org/10.32835/2223-5752.2018.16.104-108, [in Ukrainian].

Semenova, H., 2016. Pedahohichni umovy formuvannia khudozhno-tvorchoi kompetentnosti maibutnoho vchytelia obrazotvorchoho mystetstva [Pedagogical conditions of formation of artistic and creative competence of the future teacher of fine arts]. *Molod i rynok [Youth and market],* 8, s. 160-164, [in Ukrainian].

Seredina, I., 2018. Pidpryiemnytska kompetentnist maibutnikh bakalavriv z ekonomiky pidpryiemnytstva yak naukovo-pedahohichna problema[Entrepreneurial competence of future bachelors in business economics as a scientific and pedagogical problem]. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPN Ukrainy. Profesiina pedahohika[Scientific herald of the Institute of vocational education and training of NAES of Ukraine. Professional Pedagogy],* 16, s. 94-96. https://doi.org/10.32835/2223-5752.2018.16.104-108, [in Ukrainian].

Soloveva, A., 2010. *Formirovanie professionalnoy kompetentnosti buduschih dizaynerov v negosudarstvennyih VUZah [Formation of professional competence of future designers in non-state universities]:* avtoreferat. Kandidat nauk. Uchrezhdenie rossiyskoy akademii obrazovaniya «Institut soderzhaniya i metodov obucheniya», [in Russian].

Turchyn, T.M., 2015. *Pedahohika mystetstva [Art Pedagogy]*: navchalno-metodychnyi posibnyk. Chernihiv: Vydavets Lozovyi V., [in Ukrainian].

Verkhovna Rada Ukrainy. Zakonodavstvo Ukrainy [Verkhovna Rada of Ukraine. Legislation of Ukraine], 2013. *Ukaz Prezydenta Ukrainy «Pro Natsionalnu stratehiiu rozvytku osvity v Ukraini na period do 2021 roku» [Presidential Decree «On the National Strategy for the Development of Education in Ukraine for the Period up to 2021»]*. [online] (Ostannie onovlennia 25 Cherven 2013) Dostupno: http://nbuv.gov.ua/UJRN/gsuk_2013_8-9_6 [Data zvernennia 11 Traven 2019], [in Ukrainian].

Fursa, O.ta Orlov, V., 2016. Problemy proektuvannia profesiinoi kariery maibutnikh fakhivtsiv iz dyzainu [Challenges to designing a professional career for future design professionals]. *Mystetska osvita: zmist, tekhnolohii, menedzhment [Mystical Revenge: Content, Technology, Management],* 11, s. 5-17, [in Ukrainian].

Yalanska, S., 2012. Tvorcha kompetentnist pedahoha yak umova efektyvnosti profesiinoi diialnosti [The creative competence of the teacher as a condition for the effectiveness of professional activity]. *Estetyka i etyka pedahohichnoi dii [Aesthetics and ethics of pedagogical action],* 4, s. 74-85, [in Ukrainian].

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Суть художньо-творчої компетентності техніків-конструкторів одягу

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Реферат.

Актуальність дослідження зумовлена потребою швейних виробництв у фахівцях техніках-конструкторах високого рівня, які повинні вміти реалізовувати свої художні, творчі й мистецькі здібності у професійній діяльності, володіти знаннями не тільки з конструювання, технології одягу, а й художніх дисциплін, спрямованих на формування художньо-творчої компетентності.

Мета: дослідити в науковій літературі складові художньо-творчої компетентності техніків-конструкторів одягу та, проаналізувавши, розкрити її сутність.

Методи: класичний аналіз психолого-педагогічної та науково-методичної літератури, законодавчих актів і нормативно-правових документів, навчально-методичної документації, матеріалів конференцій для узагальнення концептуальних підходів до вирішення проблеми розкрити суть художньо-творчої компетентності техніків-конструкторів одягу; узагальнення – з метою об'єднання і групування різних класифікацій художньо-творчої компетентності в інтегральне утворення, що виявляється у здатності особистості результативно діяти у професійній сфері для формулювання висновку.

Результати. Досліджено та розкрито складові суті художньо-творчої компетентності техніків-конструкторів одягу. Здійснено теоретичний аналіз сучасних публікацій про дослідження художніх, творчих і художньо-творчих компетентностей. Визначено, що художньо-творча компетентність займає провідне місце в структурі професійної компетентності для студентів спеціальності 182 Технології легкої промисловості. Моделювання та конструювання промислових виробів і є симбіозом художньої і творчої компетентності, який являє собою комплексну характеристику техніка-конструктора одягу, здатного виконувати художні завдання на творчому рівні. Вказано на ознаки творчої

компетентності і характеристики художньої компетентності. Обґрунтовано категоріальну суть художньо-творчої компетентності техніка-конструктора одягу, яку ми можемо розглядати в контексті художньої творчості, художнього смаку, художньо-творчої активності, художньо-творчого процесу, художньої діяльності. Акцентовано увагу на мозаїчності представлення в сучасній педагогічній літературі досвіду формування художньо-творчої компетентності техніків-конструкторів одягу в коледжах. Обґрунтовано важливість удосконалення професійної підготовки фахівців швейного виробництва шляхом підвищення уваги до формування художньо-творчої компетентності в техніків-конструкторів одягу.

Висновки: кожен різновид компетентностей відіграє певну роль у становленні професіонала-фахівця; для студентів техніків-конструкторів одягу стрижневими є компетентності, прямо пов'язані зі специфікою художньо-творчої діяльності; художньо-творча компетентність є системотвірною в загальній структурі багатовимірної професійної компетентності студентів техніків-конструкторів одягу і має метапредметний характер; вона займає важливе місце у структурі професійних компетентностей для спеціальності "182 Технології легкої промисловості. Моделювання та конструювання промислових виробів" кваліфікації "технік-конструктор" і є симбіозом художньої й творчої компетентості.

Ключові слова: *художньо-творча компетентність, художня компетентність, творча компетентність, технік-конструктор, коледж.*

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THE MODEL OF DEVELOPING LEGAL CULTURE OF FUTURE QUALIFIED MARINE WORKERS

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Abstract

Relevance: the purposeful formation of the legal culture of future qualified workers of the maritime industry, modeling this process for a more detailed study of the structural and functional features of the phenomenon is determined by the tasks of improving the quality of the professional training of maritime transport workers.

Aim: the article substantiates the structural and functional model of the process of the purposeful formation of the legal culture of future qualified workers in the institutions of professional (vocational and technical) education of the maritime profile.

Methods: the study required a number of methods such as analysis, synthesis, generalization, systematization, research of past experience, questionnaire and expert assessment.

Results. The model of the process of the purposeful formation of legal culture consists of the generalized components which can be separately considered as subsystems that become integrated from separate components. The interrelation of the system components and the integrity of the process of formation of the legal culture of future qualified maritime workers is based on the principles, ideas and trends aimed at ensuring the integrity of the generalized components. The methodological-targeted, subjective, substantive-technological and diagnostic and effective component of the suggested idealized formation have been highlighted and characterized. The logical sequence of achieving the goals and objectives of the professional and legal training of the future maritime workers has been written out. The implementation of the aim and tasks of formation of the levels of legal culture of future qualified maritime workers is being carried out in three consecutive stages: diagnostic, activity-technological and reflexive-correctional.

Conclusions: the suggested model is an ideal representation of the process of formation of the legal culture of future qualified maritime workers. It provides the consistent implementation of the stages of pedagogical interaction, and provides the achievement of activity levels of formation of the studied phenomenon in case of applying the methodological principles (approaches, principles, conditions) using the proposed methodological tools.

Keywords: *legal culture, future qualified maritime workers, model, activity, professional (vocational and technical) education institutions.*

Introduction. In recent years, commercial navigation has undergone significant changes: new generation vessels require crew reductions, at the same time, however, the operation of high-tech equipment has become more complicated for the maritime workers. Ukrainian sailors (about 80 thousand people) work in fishing, passenger, cargo-passenger, cargo and other foreign vessels because of the underdeveloped domestic merchant fleet. Ukrainian maritime diplomas and qualifications are recognized by world maritime societies, that is why Ukraine is included in the "Top Ten Provider Countries and Command Crews of Commercial Ships" (Chernenko, 2016, pp. 92). Nevertheless, according to the data from maritime employment agencies, this sector of the labor market is quite tense: due to the lack of training, Ukrainian maritime workers who work for the foreign shipowners are often signed offshore during the voyage.

Naturally, in order to improve the quality of the professional training of maritime transport workers, it is necessary not only to form professional knowledge, skills and personal qualities, but also to productively organize the process of legal training and education, purposefully to develop the legal consciousness of students, their ability to use legal knowledge to achieve professional results. It is the effective vocational training of future qualified maritime workers that should become an integral part of the educational process in maritime vocational training institutions, as well as the necessary component of the professional development of the personality.

Considering these positions, the purposeful formation of the legal culture of future qualified workers of the maritime industry, modeling of this process for a more detailed study of the structural and functional characteristics of this phenomenon has currently become an urgent scientific problem.

The article aim is the substantiation and construction of the structural model of the process of purposeful formation of the legal culture of future qualified workers in professional (vocational and technical) education institutions of marine profile.

Methods. The study used the following methods: analysis of scientific papers on the issue to identify the state of the problem in the pedagogical theory and practice; synthesis, abstraction, systematization, generalization for the substantiation and construction of the structural model of the process of purposeful formation of the legal culture of future qualified workers in the professional (vocational and technical) education institutions of marine profile.

Materials. The results of the analysis of the available scientific works show that the problem of the formation of the legal culture of the individual has always been the scientific research object among philosophers, teachers, psychologists. In particular, many scientific works are devoted to the determination, structure, factors of formation of the professional culture of future specialists in various professional fields, such as the works of G. Ball, M.Boyko, A. Vidra, A. Vineslavskaya, N. Voloshko, V. Grinyova, E. Klimov, A.Prosfor, V. Rybalka etc. Scientific aspects of the formation and development of the legal personality culture were investigated by such scientists as G. Balyuk, K. Volynka, L. Gerasina, N. Golovko, I. Golosnichenko, V. Kaminskaya, M. Keizer, O. Makeeva, O. Skakun, A. Sukharyova, N. Fomenko, I. Khomyshyn, Y. Shemshuchenko and others. Despite the diversity of approaches to determination of the phenomenon and the structure of the legal culture of the individual, the researchers agree in the point that it is the formation of a personality that combines socio-legal and legal knowledge, moral and ethical values, skills of legal actions and legal behavior. The issues of professional training of future maritime workers were considered in the scientific research of M. Babyshena, O. Bezbakh, L. Gerganov, T. Zaitseva, L. Ershova, V. Onishchuk, M. Kulakova, I. Sokol, N. Chernenko, M. Sherman and others.

Instead, it should be noted that the problem of the formation of the legal culture of future qualified maritime workers (sailors and ship motorists (machinists), ship electricians etc.) in the professional (vocational and technical) education institutions of the marine profile has not yet been the subject of the specific study.

Results and discussion. Scientists are convinced that objectively characterizing a particular pedagogical phenomenon (object, process) is completely impossible, it is only possible to try to understand the essence of the phenomenon, without considering the received ideas to be satisfying. This happens due to the fact that the dynamic and complex pedagogical processes, objects and phenomena are constantly changing. The only opportunity to deeply study the pedagogical phenomenon is to formalize it in a way that would allow us to trace the main features and characteristics of this phenomenon. This can be done using the pedagogical modeling.

First of all, we should point out that a model (fr. modele – a sample) is an imaginary or materially implemented system that displays or reproduces an object of study (natural or social one) and is able to replace it with a simpler prototype so that its study gives new information about this object (Mikheev, 2006). As E. Lodatko notes, that the research of the objects in the modeling process enables to obtain information about the properties of the object in a simplified way; to transfer information and knowledge about the object to other information consumers; to use of information received to manage objects and processes; to predict and diagnose the behavior of an object within its range of existence (Lodatko, 2010, pp. 10).

In view of the above, the study provides an ideal representation of the process of the formation of the legal culture of future qualified maritime workers which reflects the logic of our scientific search and is a means of solving the current scientific problem. In addition, we consider the prototype of the real process of professional and legal training of the maritime workers as a mechanism for ensuring effective conditions of the development of the pedagogical system (integrity, communication, structuredness, multiple level composition etc.).

The model of the process of the purposeful formation of the legal culture consists of the generalized components which can be separately considered as subsystems that become integrated from separate components. The interrelation of the system compo-

nents and the integrity of the process of formation of the legal culture of future qualified maritime workers is based on the principles, ideas and trends aimed at ensuring the integrity of the generalized components.

The structure of the suggested model of the formation legal culture of future qualified maritime workers consists of the methodological-targeted, subjective, substantive-technological and diagnostic and effective components *(pic.1*). Let us briefly characterize these structural components of the model.

First of all, the methodological-targeted component includes the purpose of the process under study, i.e. to ensure the purposeful formation of the sufficient levels of the legal culture of future qualified maritime workers of the maritime industry. The achievement of the given aim is ensured by solving a number of tasks: accumulation of a fund of legal knowledge in general and the international maritime law in particular; formation of the legal values and beliefs; development of motivation to master the legislative acts; raising the insistence of high standards in observance of legal norms (including international legal ones), especially when working in a multicultural team; formation of the ability to solve professional legal problems; enhancing the social and legal activity of future qualified maritime workers; formation of legal responsibility of students for their own actions; development of legal education, socially meaningful and practical activity of students to show the legal activity in studying, preservation of knowledge and ways of solving problems by means of law.

While determining them we aimed at the fact that future sailors of the ship, court motorists, ship electricians and others should have the high level of the professional and legal training to work in both national and foreign shipping companies.

In addition, the given formulation of the aims and objectives of the formation of the legal culture of future maritime workers is made in accordance with the provisions of the Cabinet of Ministers of Ukraine Decree No. 1108 of December 18, 2018 "On Amendments to the Maritime Doctrine of Ukraine for the Period up to 2035", particularly: "Implementation of International Legal standards require a well-structured system for ensuring the safety of navigation and the protection of ships and port facilities ... To improve the efficiency of this structure, it is necessary to improve the existing legal and regulatory framework by removing the controversies in the legislation." The updated Maritime Doctrine envisages preserving the human resources of Ukrainian maritime workers "by duly fulfilling the requirements of the International Convention on the Training and Certification of Seafarers and Watchkeeping, the International Convention on Standards of Training, Certification of Fishing Vessels and Watchkeeping of 1995, bringing national standards relating to knowledge and specialties on which the preparation of the applicants ... of education is performed, in accordance with the above conventions." (Verkhovna Rada of Ukraine. Legislation of Ukraine, 2018). The aim and objectives of the simulated process are determined by the social order for professionally competent qualified maritime workers with the sufficient levels of legal culture formation. At the same time with achieving the aims planned, the legal culture as an integrative characteristic feature of the individual should also fulfill the following basic functions:

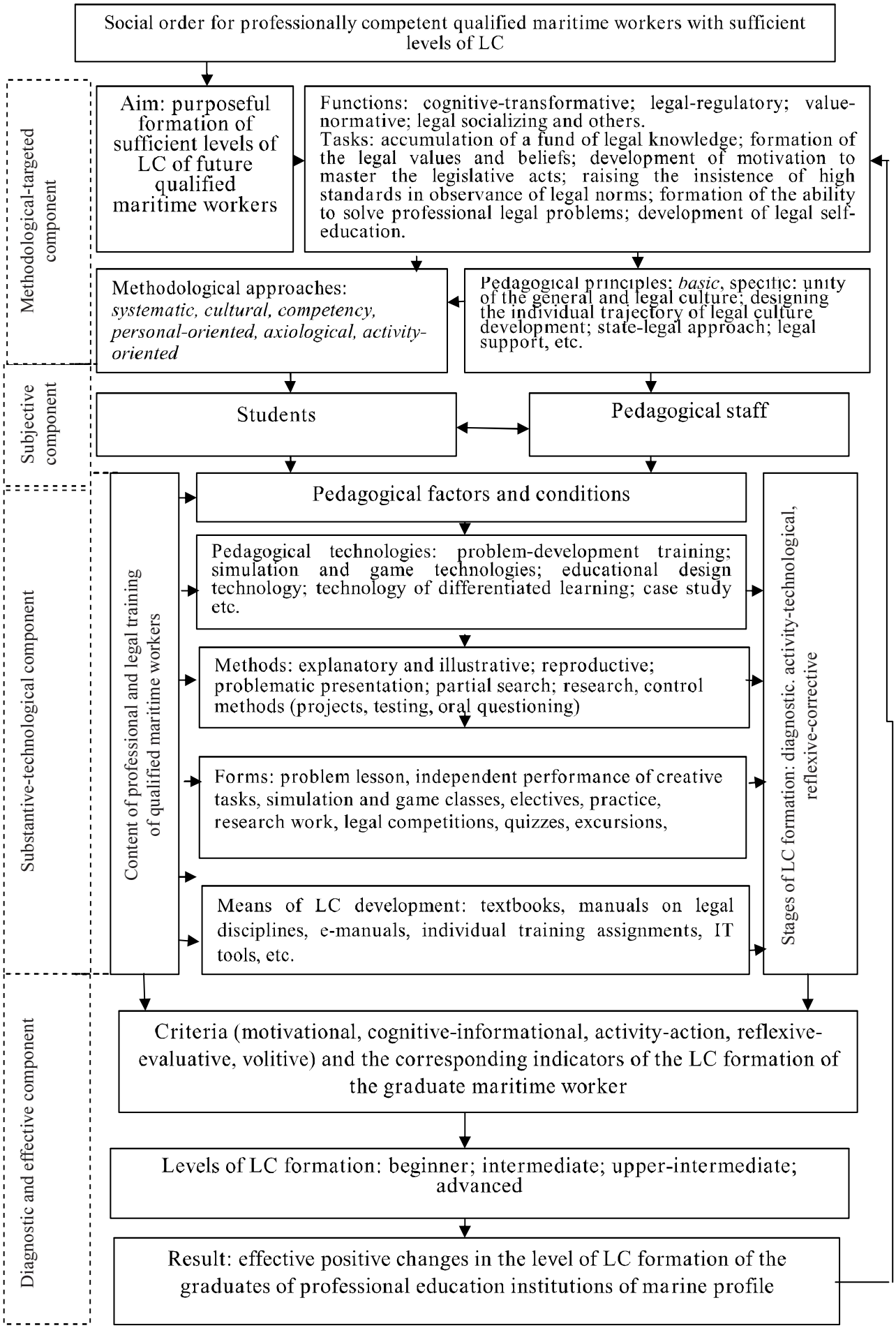
– *legal-regulatory function* of the legal culture aims at ensuring the stable functioning of all elements of the legal system. Due to their values, norms, principles, traditions and behavior samples, the legal culture can consolidate different social groups, including the ship crews, concentrate their efforts on the formation of legal activity. The legal-regulatory function enables the subordination of the crew members' life to certain rules, the realization of their needs, interests, social aspirations and beliefs, reciprocity of rights and obligations in legal relations;

– v*alue-normative function* of the legal culture is demonstrated in phenomena and facts that become valuable when reflected in people's minds and actions. On this basis, legal norms and other components of the legal culture are becoming the objects of assessment. When the students encounter a new value of the legal culture, they can assess them from the standpoints of the values which have already been developed, approving some elements of legal reality and rejecting others;

– *legal socializing function* of the legal culture is manifested in the formation of the legal personal qualities of the future qualified maritime worker. The legal reality has a great impact on this process. Moreover, the purposeful legal education activities in professional (vocational and technical) educational institutions, measures to provide legal assistance to students, intensification of the processes of legal self-education of the future maritime workers' personality are required.

– *communicative function* of the legal culture ensures communication of citizens in the legal environment. Legal communication acts as a form of interpersonal interaction, being actual in the context of solving professional legal problems by representatives of different languages and cultures (for example, international ship crew). Mastering this function allows determining the relation to the legal cultural heritage as well as other types of modern legal culture;

– *prognostic function* of the legal culture covers law-making and implementation of law, problems



Pic. 1. Structural model of the formation of the legal culture (LC) of future qualified maritime workers

of strengthening law and order, ensuring the lawful behavior of citizens, their civic activity, etc. The prognostic function involves analyzing trends that are inherent in the entire legal system.

For the purposeful formation of the legal culture of students, we expect to use the requirements of the following methodological approaches: *cultural, competency, systematic, personal-oriented, axiological and activity-oriented.* Let's consider each of them briefly.

Cultural approach provides the process of formation of the legal culture of students through the active development of its basic elements: legal knowledge, skills, values, development of certain views and beliefs. The principle of the cultural approach is to study the spirituality of the individual in the context of its cultural existence, harmonization of the spiritual world of the individual in the process of mastering the existing cultural programs. The benefit of a cultural approach for the formation of the legal culture of future maritime workers is the ability to study the legal problems of the maritime industry in a complex way, in connection with many factors and phenomena.

Competency approach reflects the training content of future qualified maritime workers. The content is not limited to a knowledge-oriented component, but involves the acquisition of holistic experience in solving life problems, the fulfillment of key functions, social roles, the identification of competencies. The basis for implementing a competency approach is the use of pedagogical technologies or techniques that guarantee the achievement of the intended educational outcomes (Luzan, 2018). Competency methodology is designed to align education and labor market requirements, eliminate the contradictions between educational and professional activities in today's multifactorial market and economic space.

Systematic approach is the only general scientific methodology that treats the objects under research as a system. Structurally, the system of legal culture formation combines the aims, content, forms, methods, means of legal education, pedagogical activity of the teacher, educational and cognitive activity of students and the control of the results of professional and legal training of future qualified maritime workers. It is the systematic approach that allows to unite the given components of the educational process and ensure the integrity of the phenomenon development.

Personal-oriented approach provides freedom to choose the content of professional legal education in order to meet the educational, spiritual, cultural and vital needs of the student's personality, the possibility of self-organization in the cultural and educational environment. The methodology of this approach allows considering the professional and legal training of students as a planned, continuous, specially organized pedagogical process aimed at the development and self-development of the personality of future maritime workers taking into account their interests, abilities, individual characteristics.

Axiological approach is aimed at acquiring the meaning of the future qualified maritime workers' activities within the society and culture. According to this approach, legal culture should be seen as a system of legal values that are made in the process of social development and contain the foremost achievements of the legal culture of the mankind. In this case, legal awareness, legal activity, preference for legal or non-legal procedures, recognition or non-recognition of the value of the rights is given as the main indicators of the legal culture formation.

Activity-oriented approach in the legal culture formation of future qualified maritime workers directs pedagogical cooperation to the development of forms of professional and legal activity of students. Psychologists have shown that the full development of personality (cognitive, emotional-value, volitional area, personal qualities) is possible only if the person is involved in the activity being its subject, but not only an object of the external influence. In the context of this study, the activity-oriented approach asserts the idea of the formative and developmental purpose of the activity, the idea of modeling the legal situations while training.

This methodology of the formation of the legal culture of future qualified maritime workers is implemented using certain principles. Theoretical analysis of the problem, the results of experimental work allowed us to distinguish the following *general* principles of the formation of the legal culture of students: scientific content and teaching methods; humanization of the educational process; continuity of development; dynamism; systematic and consistent learning; modularity of training; development of educational and legal environment; conscious and active learning; combination of theory and practice; modeling of legal activity in the educational process, etc.

The *specific principles* of the formation of the integrative personal quality under research include the following norms: cultural correspondence; unity of the general and legal culture; designing the individual trajectory of legal culture development; universal education; state-legal approach; axiological nature; social and legal service; involvement in social, legal education and human rights activities; unity of rights and responsibilities; legal self-reliance; value-oriented directivity; organization of legal self-education and self-development; comprehensiveness; problem-based principle; national orientation; multicul-

turalism; legal and regulatory framework, etc.

The subjective component of the model brings together pedagogical engagement participants (students and pedagogical staff) to purposefully formulate the sufficient levels of legal culture for future qualified maritime workers. The professional legal training is considered as a system. The centre of the system is the subjects of the educational process, and all the other components are the conditions, means of achieving the aim.

The realization of the aim and tasks of the formation of the levels of legal culture of future qualified maritime workers is carried out in three consecutive stages: diagnostic, activity-technological and reflexive-corrective.

Functionally, these stages are reflected in the *substantive-technological component* of the model as a set of methods of acquiring the legal material (narration, explanation, conversation, discussion, persuasion, moral encouragement, competitions, exercises that can be explanatory-illustrative, reproductive or problematic), forms of professional legal training (problem lesson, independent performance of creative tasks, simulation and game classes, electives, practice, research work, legal competitions, quizzes, excursions, meetings with employees of the shipyard) and the appropriate means, the main elements of which are the word, image and activities (textbooks, manuals on legal disciplines, stands, posters, individual training assignments, educational information resources, other means of IT technologies, and others.).

In accordance with the given model, the methods, forms and means of professional legal training are carried out at the stages of technology of educational design, technology of problem-developmental training, imitation-game training, case technology, etc. The choice of methods, forms, technologies of professional and legal training of future qualified maritime workers in the study is determined by the following basic pedagogical conditions: purposeful formation of the students' need for professional legal knowledge; the use of innovative pedagogical technologies in the professional training of the maritime workers; introduction into the educational process of the elective course "Legal culture of the modern sailor"; organization of the productive self-educational cognitive-legal activity of students.

The development and further effective implementation of the model of formation of the legal culture of future maritime workers are possible only on the basis of specific content. The content of the formation of the legal culture of future qualified maritime workers is the combination of legal and professional knowledge, skills, values and ideals, norms of behavior, elements of the material and moral constituent of the society, which are aimed at the formation of the legal culture and are subject to the transformation into the inner world. In our opinion, the content of the formation of the legal culture is a systematic component of the developed model. It can be used to clearly control the process and result of the formation of the legal culture.

The forth, *diagnostic and effective component* of the model consists of criteria, indicators, levels of legal culture formation and projected output. This component is based on the assumption that subject to the holistic implementation of the developed methodology, the achieved results will meet certain criteria for assessing the levels of legal culture of future qualified maritime workers. In turn, diagnostic results should empirically confirm the correctness of theoretical approaches to the formation of the students' legal culture.

Conclusions. The suggested model is an ideal representation of the process of formation of the legal culture of future qualified maritime workers. It provides the consistent implementation of the stages of pedagogical interaction, and provides the achievement of activity levels of formation of the studied phenomenon in case of applying the methodological principles (approaches, principles, conditions) using the proposed methodological tools.

The prospects for further scientific research are related to the experimental verification of the methodology of implementing the model of the formation of the legal culture of future qualified maritime workers in the institutions of professional (vocational and technical) education of the marine profile.

List of references

Лодатко, Є. О., 2010. *Моделювання педагогічних систем і процесів: монографія.* Слов'янськ: СДПУ.

Лузан, П. Г., 2004. *Теоретичні і методичні основи формування навчально-пізнавальної активності студентів у вищих аграрних закладах освіти.* Доктор наук. Національний аграрний університет.

Лузан, П.Г., Пащенко, Т.М., Ваніна, Н.М. та Колісник, Н.В., 2018. Стандартизація професійної освіти на основі компетентнісного підходу *Science Rise*, 5 (25), с. 32-35.

Михеев, В. И., 2006. *Моделирование и методы теории измерений в педагогике: 3-е изд., стереотип.* Москва: КомКнига.

Верховна рада України. Законодавство України, 2018. *Про внесення змін до Морської доктрини України на період до 2035 року: Постанова Кабінету Міністрів України від 18 грудня 2018 року № 1108.* [online] (Останнє

оновлення 28 Грудень 2019) Доступно: <https://zakon.rada.gov.ua/laws/main/1108-2018-%D0%BF> [Дата звернення 20 Листопад 2019].

Прохорчук, П., 2018. Проблема формування професійно-етичної культури у психолого-педагогічній літературі. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка, 16,* с. 68-73.

Радкевич, В. О., 2016. Теоретичні та методичні засади розвитку професійної освіти і навчання: результати, проблеми, перспективи. *Науковий вісник Інститут професійно-технічної освіти НАПН України. Професійна педагогіка,* 11, с. 5-23.

Черненко, Н. І., 2016. *Педагогічні умови реалізації андрагогічного підходу у професійній підготовці робітників морського транспорту.* Кандидат наук. Комунальний вищий навчальний заклад «Херсонська академія неперервної освіти» Херсонської обласної ради.

International Maritime Organization: база даних Міжнародної морської організації. [online] Available at: <http://www.imo.org/en/OurWork/HumanElement/TrainingCertification/Pages/Default.aspx> (Дата звернення 20 Вересень 2019).

Bazyl, L. O., Shatkovska, H. I., Klymenko, M. M., and Radkevych, V. O., 2019. Psychological and pedagogical features of the career growth of vocational education's teachers. *Opcion, 35* (Special Issue 23), pp. 763-779.

Translated & Transliterated

Lodatko, Ye. O., 2010. *Modeliuvannia pedahohichnykh system i protsesiv [Modeling of pedagogical systems and processes]: monohrafiia.* Sloviansk: SDPU, [in Ukrainian].

Luzan, P. H., 2004. *Teoretychni i metodychni osnovy formuvannia navchalno-piznavalnoi aktyvnosti studentiv u vyshchykh ahrarnykh zakladakh osvity [Theoretical and Methodological Foundations of Formation of Educational and Cognitive Activity of Students in Higher Agricultural Educational Institutions].* Doktor nauk. Natsionalnyi ahrarnyi universytet, [in Ukrainian].

Luzan, P. H., Pashchenko, T.M., Vanina, N.M. ta Kolisnyk, N.V., 2018. Standartyzatsiia profesiinoi osvity na osnovi kompetentnisnoho pidkhodu [Standardization of a professional education according to a competency principle]. *Science Rise,* 5 (25), s. 32-35, [in Ukrainian].

Miheev, V. I., 2006. *Modelirovanie i metodyi teorii izmereniy v pedagogike: 3-e izd., stereotip. Moskva: KomKniga [Modeling and methods of measurement theory in pedagogy]*: 3-e yzd., stereotyp. Moskva: KomKnyha [in Russian].

Verkhovna Rada Ukrainy. Zakonodavstvo Ukrainy [Verkhovna Rada of Ukraine. Legislation of Ukraine], 2018. *Pro vnesennia zmin do Morskoi doktryny Ukrainy na period do 2035 roku: Postanova Kabinetu Ministriv Ukrainy vid 18 hrudnia 2018 roku № 1108 [On Amendments to the Maritime Doctrine of Ukraine for the Period up to 2035: Resolution of the Cabinet of Ministers of Ukraine of December 18, 2018 No. 1108].* [online] (Ostannie onovlennia 18 Hruden 2018) Dostupno: <https://zakon.rada.gov.ua/laws/main/1108-2018-%D0%BF>. [Data zvernennia 20 Lystopad 2019], [in Ukrainian].

Prokhorchuk, P., 2018. Problema formuvannia profesiino-etychnoi kultury u psykholoho-pedahohichnii literaturi [The problem of forming the professional and ethical culture in psychological and pedagogical literature]. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPN Ukrainy. Profesiina pedahohika [Scientific Herald of the Institute of Vocational Education and Training of the National Academy of Pedagogical Sciences of Ukraine. Vocational pedagogy],* 16, s. 68-73, [in Ukrainian].

Radkevych, V. O., 2016. Teoretychni ta metodychni zasady rozvytku profesiinoi osvity i navchannia: rezultaty, problemy, perspektyvy [Scientific Herald of the Institute of Vocational Education]. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPN Ukrainy. Profesiina pedahohika [The Scientific Journal of the Institute for Vocational Education of NAES of Ukraine],* 11, s. 5-23, [in Ukrainian].

Chernenko, N. I., 2016. *Pedahohichni umovy realizatsii andrahohichnoho pidkhodu u profesiinii pidhotovtsi robitnykiv morskoho transportu [Pedagogical conditions for the implementation of the andragogical approach in the professional training of maritime transport workers].* Kandydat nauk. Komunalnyi vyshchyi navchalnyi zaklad «Khersonska akademiia neperervnoi osvity» Khersonskoi oblasnoi rady, [in Ukrainian].

International Maritime Organization: Database of the International Maritime Organization. [online] Available at: <http://www.imo.org/en/OurWork/HumanElement/TrainingCertification/Pages/Default.aspx> (Applying Date Lystopad 20 2019), [in English].

Bazyl, L. O., Shatkovska, H. I., Klymenko, M. M., and Radkevych, V. O., 2019. Psychological and pedagogical features of the career growth of vocational education's teachers. *Opcion*, 35 (Special Issue 23), pp. 763-779, [in English].

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Модель формування правової культури майбутніх кваліфікованих робітників морського профілю

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Реферат.

Актуальність: цілеспрямоване формування правової культури майбутніх кваліфікованих робітників морської галузі, моделювання цього процесу для більш детального вивчення структурно-функціональних особливостей феномену визначається завданнями підвищення якості професійної підготовки робітників морського транспорту.

Мета: обґрунтувати структурно-функціональну модель процесу цілеспрямованого формування правової культури майбутніх кваліфікованих робітників у закладах професійної (професійно-технічної) освіти морського профілю.

Методи: аналіз, синтез, узагальнення, систематизація, вивчення попереднього досвіду, анкетування та експертна оцінка.

Результати. Модель процесу цілеспрямованого формування правової культури складається зі складових узагальненого характеру, які в самостійному вигляді можуть розглядатися як підсистеми, що інтегруються з окремих складників. Взаємозв'язок компонентів системи і цілісність процесу формування правової культури майбутніх кваліфікованих робітників морського профілю забезпечується опорою на закономірності, ідеї та тенденції, спрямовані на забезпечення цілісності узагальнених компонентів. У структурі пропонованого ідеального утворення виділено і схарактеризовано такі блоки: методологічно-цільовий, суб'єктний, змістово-технологічний та критеріально-результативний. Виписано логічну послідовність досягнення цілей і завдань професійно-правової підготовки майбутніх моряків. Реалізація мети та завдань формування рівнів правової культури майбутніх кваліфікованих робітників морського профілю здійснюється впродовж трьох послідовних етапів: діагностичного, діяльнісно-технологічного та рефлексивно-корекційного.

Висновки: запропонована модель є ідеальним уявленням про процес формування правової культури майбутніх кваліфікованих робітників морського профілю, передбачає послідовну реалізацію етапів педагогічної взаємодії, а при дотриманні методологічних засад (підходи, принципи, умови) запропонованим методичним інструментарієм забезпечує досягнення діяльнісних рівнів сформованості досліджуваного феномену.

Ключові слова: *правова культура, майбутні кваліфіковані робітники морського профілю, модель, діяльність, заклади професійної (професійно-технічної) освіти.*

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SOME ISSUES AND PROSPECTS OF DEVELOPING ENTREPRENEURIAL COMPETENCY IN FUTURE BACHELORS IN BUSINESS ECONOMICS DURING PROFESSIONAL TRAINING

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Abstract.

The relevance of this research lies in the intensive development of higher economic education in Ukraine and the strong demand of society and Ukraine's economics for the specialists ready to pursue a professional career under the conditions of small business development.

Aim: the paper aims to identify and describe the current issues and prospects of developing entrepreneurial competency in future bachelors in business economics during professional training.

Methods: a classic analysis of official documents and scientific works on the issue of developing entrepreneurial competency: external analysis (taking into account the historical circumstances of the creation of selected documents as elements of a particular system of socio-economic relations; determining its importance and effectiveness given specific research issues); internal analysis (focusing on the content of the source; identifying some issues and prospects of developing entrepreneurial competency in future specialists during professional training in HEIs):

Results. The paper shows that modern scholars have different views on the concept of entrepreneurship. However, they agree that the success of entrepreneurial activity depends on graduates' entrepreneurial competency. The paper indicates that modern bachelors in economics must be well-rounded, intelligent, highly-cultured and well-mannered, competent in commercial matters and continuously enhance their professionalism, given the needs of Ukraine's economic development. Besides, it proves that entrepreneurial competency is mostly understood as a set of personal and business qualities, skills, knowledge, behaviour models, which help to solve specific economic issues and achieve high results.

Conclusions. The paper identifies the primary issues of developing entrepreneurial competency in future bachelors in business economics. They are as follows: students' lack of motivation to show entrepreneurial initiative; unreadiness for entrepreneurial activity; unacceptable levels of entrepreneurial competency; inefficient degree programmes; a particular imbalance between professional and core competencies. Also, the paper outlines the prospects of developing entrepreneurial competency in future bachelors in business economics. They involve reforms in the system of national education; the development and implementation of the author's programmes in economic courses; the introduction of specialized courses for developing entrepreneurial competency; the digitalization of higher education; the implementation of innovative international experience in training for entrepreneurial activity into the practice of Ukrainian HEIs.

Keywords: *entrepreneurship, business economics, competency, entrepreneurial competency, bachelor's degree.*

Introduction. Recent changes in society, economics, higher education and the state system propose a new paradigm of human capital development in Ukraine. The development of higher economic education in Ukraine requires the use of new educational technologies, which can help to train graduates ready for professional activities and with a high level of professional and economic culture, as well as entrepreneurial competency. Under the conditions of a market economic system, it is essential to prepare young people for changes and help them to adapt to radical transformations in the social and economic life of society. It is possible only if they have a sufficient level of entrepreneurial competency, which will assist them in achieving real success in any field of professional activities. In this regard, HEIs must provide relevant conditions for training not only specialists with relevant knowledge but also competitive and creative employees. Therefore, the development of entrepreneurial competency in young people should aim to develop an entrepreneurial culture in society since it is essential for the country's economic growth.

Sources. Many sources indicate that entrepreneurial competency is developed based on specific innate abilities, some of which can be developed and acquired with experience. Scientific literature shows that only 11% of the population have entrepreneurial skills (Vasyltsiv, 2009). Such opinions are quite controversial, even though having long-standing historical roots. Using scientific tools of geocultural, ethnocultural, socio-cultural, biographical, typological and other approaches, L. Yershova (2018a) conducts a historical analysis of the causes and effects of changes in the image of Ukrainian multinational economic elite during the 19th century – the early 20th century, especially their relation to entrepreneurship and economic education.

R. Hizrich & M. Piters (1992) believe that one can easily teach business to those people who have a natural ability for it. Thus, they identify 14 competencies necessary for entrepreneurship. They are critical thinking, abilities to make non-standard decisions, initiate new ideas, evaluate prospects, readiness to open a new business, creative and critical evaluation of work situations, the conclusion of agreements, stress resistance, moral and ethical culture, communication skills to establish contacts and conduct negotiations.

According to V. Maikovska (2017), entrepreneurial competency is developed based on professional economic training (education). It includes a well-developed motivation to show entrepreneurial initiative, skills of successful business activity, knowledge about current business legislation, readiness for self-development and self-realization, ability to navigate in economic and financial categories.

Despite many studies on entrepreneurial competency, Ukrainian scholars interpret entrepreneurship in different contexts. Justifying the goals of developing entrepreneurial competency, some scholars prioritize profit-making, whereas others focus on innovative and non-standard approaches to solving matters or the risky nature of commercial and economic activities. However, they agree on the fact that the success of business depends on the level of core competencies (Zakatnov, 2007; 2009; 2015; Lemeshko, 2018; Odnoroh, 2018; Radkevych, 2016; Yablunovska, 2018).

The paper analyzes the Concept of Development of Economic Education, decrees of the Cabinet of Ministers of Ukraine, the State Standard of Higher Professional Education Regarding a Bachelor's Degree in Economics (Specialty 051) and the National Framework of Qualifications. Summarizing these legal documents and recent research, the author of the paper concludes that entrepreneurial competency is viewed as a set of personal and business qualities, skills, knowledge, behaviour models, which help to solve specific economic issues, engage in self-management, show initiative, take appropriate risks.

The paper aims to identify and describe the current issues and prospects of developing entrepreneurial competency in future bachelors in business economics during professional training.

Methods: a classic analysis of official documents and scientific works on the issue of developing entrepreneurial competency: external analysis (taking into account the historical circumstances of the creation of selected documents as elements of a particular system of socio-economic relations; determining its importance and effectiveness given specific research issues); internal analysis (focusing on the content of the source; identifying some issues and prospects of developing entrepreneurial competency in future specialists during professional training in HEIs), as well content analysis of certain legal documents.

Results and discussion. Modern Ukrainian scholars regard bachelors in economics as intellectuals with a broad scientific outlook, a stable civic culture and well-developed entrepreneurial competency, who are ready for personal and professional development. The Concept of Development of Economic Education in Ukraine also focuses on the training of well-rounded professionals, active members of society with a broad scientific outlook and a talent for self-realization. However, the development of economic education should be accessible, open, systematic and continuous, combining the professionalism of degree programmes and innovative content (Verkhovna Rada of Ukraine. Legislation of Ukraine, 2003).

The modern labour market needs competent specialists. The concept of competency is comprehensive and includes not only knowledge but also specific competencies implying abilities, skills and moral

values. Still, graduates need to be able to act effectively not only in educational but also in other fields. It refers to the situations when it is necessary to solve some issues, clarify their conditions and evaluate the obtained results independently. Education should aim to train specialists with a high level of knowledge who can think, acquire and apply knowledge in practice. Therefore, it is crucial to choose the appropriate educational content, means, forms and methods that provide more significant opportunities for both development and self-realization of the individual.

Higher education training lay the foundations of professionalism and develop the skills of independent professional activity. Therefore, students should realize that independent work completes all other types of educational work since knowledge not required for professional activities is not a real property of the specialist. Today, lecturers use a wide range of different types of activities to teach students to work independently: exercises, tasks, study of educational literature, reviewing and annotating, various types of note-taking (extracts, abstracts), preparation of written reports (abstracts, articles), structural and logical schemes of lectures, various projects.

In the system of modern higher education, there are also some issues decreasing students' motivation towards educational and cognitive activities, self-development and self-study. They are the results of students' difficult adaptation to real working conditions, inability to apply the obtained theoretical knowledge and economic tools. Some graduates do not have the necessary knowledge about starting their business, the principles of the tax system and the mechanisms of economic analysis. They cannot summarize the acquired knowledge and apply it in practice. Bachelor programmes in business economics do not balance general scientific, professional and specialized courses, which negatively affects the educational process (Yevtushevskyi, 2002; Poiasok, 2003; Tkalenko, 2011). Thus, it is essential to improve the educational process in HEIs which provide degree programmes in economics.

Some scholars suggest that reforms in higher economic education should focus on the use of innovative educational technologies, multifunctional interdisciplinary links, independent work in the educational process, a collaboration between educators and stakeholders. It is also vital to implement scientific results of students and lecturers into practice (Kovalchuk, 1999). Thus, professional training of future bachelors in business economics should be considered as a process of developing students' competencies, motivating them towards self-study and self-development, as well the ability to organize the educational process independently.

Research activities are also beneficial for future specialists in business economics since such activities can help to develop their professional competency rather effectively and reveal the potential of every student (Haiduchenko, 2015). Doing some research, students learn to see and analyze problem situations. Cognition occurs through the implementation of three main activities. They involve creating a personal, educational product; comprehending the profession and the self in it; organizing cognition and creation. It will allow future bachelors in business economics to use the basic types of professional activities and diversify professional results.

Entrepreneurial competencies are prognostic, methodological, communicative and in demand in the modern world. In other words, every graduate must be an entrepreneur in one way or another. In the context of education, entrepreneurship aims to unlock a personal potential of individuals so that the student is seen as unique integrity in the ability to achieve specific goals. Entrepreneurs do not just perform some functions. First of all, they implement their ideas. They need to be aware of and identify their capabilities, as well as to take responsibility for the risks of exceeding them. They should be able to evaluate the future effects of their actions and defend their entrepreneurial strategies reasonably. Therefore, entrepreneurs need to be able to act individually (self-confidence; abilities to engage in dialogue, defend their viewpoints, understand alternative viewpoints, reach a compromise, evaluate economic situations adequately, find optimal business decisions).

A well-developed entrepreneurial competency of future economists is one of the requirements of the State Standard of Higher Professional Education Regarding a Bachelor's Degree in Economics (Specialty 051). The idea of complex and systematic training of students for entrepreneurship is becoming more and more critical regarding the organization of the educational process in HEIs. Although Ukrainian HEIs have gained considerable experience in training future bachelors in business economics, they do not meet the needs of the modern labour market caused by the digital revolution and the following socio-economic processes (Bazeliuk, 2018; Yershov, 2019).

Besides, one should pay much attention to understanding competency as a set of knowledge, skills and personal qualities needed to perform different entrepreneurial tasks. Therefore, it is essential to balance the professional and core competencies necessary for developing entrepreneurial competency (Zakatnov, 2007; Yershova, 2018b). The following components of economic training should be viewed as psycho-pedagogical conditions for developing entrepreneurial competency: clarifying educational goals and objectives; providing educational guidance; boosting students' motivation towards self-study;

allocating more hours to independent work; making students more aware of possible mechanisms, methods, forms and results of economic training; improving the educational process; using new information technologies and the Internet; preparing teaching staff for developing students' economic culture; specifying psychological characteristics of individuals and their focus on economic activities.

Practical training of future bachelors in business economics takes place throughout the whole period of study. It includes industrial, economic and pre-diploma types of practice, which focus on different tasks but pursue a single purpose, namely, to provide students with practical experience. As a result, students establish strong links with production. New specialists do not feel themselves as "newcomers" in the labour market since they are more competitive and have practical experience in addition to theoretical knowledge. After graduating, most specialists in business economics work in the companies where they did their practice. Besides, students need to prepare course papers and practically all qualifying bachelor theses based on the experience gained from working in real companies.

Conclusions. The studies on entrepreneurship as a pedagogical phenomenon and the results from the analysis of a current legal framework for professional training of future economics specialists for entrepreneurship show that there are specific issues in the context of the research issue. They are the following:

– although the system of higher education in Ukraine has gained some positive experience in training future bachelors in business economics, the socio-economic processes and the development of production and companies necessitate constant adjustments to its content in both theoretical and applied aspects, which HEIs are unable to ensure on time;

– traditional professional training of bachelors in business economics cannot fully ensure the quality training of future economists who should able to solve complex problems of the country's economic development;

– HEIs lack robust mechanisms of employers and students' influence on building the content of degree programmes, which results in low levels of entrepreneurial competency in future specialists in business economics;

– HEIs formally acknowledge the importance of soft and digital skills in training specialists ready for professional success; yet, they cannot achieve a precise balance in developing professional and core competencies necessary for developing entrepreneurial competency;

– little importance given to social and humanities courses in HEIs not specializing in humanities results in the low motivation of graduates to show entrepreneurial initiative and readiness for entrepreneurial activity.

The steps necessary for improving mechanisms of developing entrepreneurial competency in HEIs are as follows:

– approving standards of higher education;

– updating the system of national education taking into account a competency-based approach;

– improving mechanisms of developing entrepreneurial competency by developing and implementing the author's programmes of economic courses;

– introducing specialized courses aimed at developing entrepreneurial competency;

– studying the experience of teaching economics in HEIs in developed countries;

– introducing innovative international experience into Ukrainian HEIs, taking into account the peculiarities of Ukraine's economic development and mentality;

– creating relevant conditions in HEIs for improving a digital culture of graduates.

Further research should aim to define criteria, indicators and levels of development of entrepreneurial competency in future bachelors in economics during professional training.

List of references

Базелюк, О., 2018. Зміст і структура цифрової культури педагогічних працівників закладів професійної освіти. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка, 16*, с. 81-87. DOI: http://doi.org/10.32835/2223-5752.2018.16.81-87.

Васильців, Т.Г., 2009. Удосконалення державного регулювання підприємницької діяльності в Україні. *Стратегічні пріоритети,* 1(10), с. 145-149

Верховна Рада України. Законодавство України, 2003. *Концепція розвитку економічної освіти в Україні.* [online] Доступно: https://zakon.rada.gov.ua/rada/show/v12_7290-03/sp:max25 [Дата звернення 09 грудня 2019]

Верховна Рада України. Законодавство України, 2014. Закон України *«Про вищу освіту»*. [online] (Останнє оновлення 06 Червень 2019) Доступно: <http://zakon5.rada.gov.ua/laws/show/1556-18>. [Дата звернення 10 Травня 2019].

Гайдученко, Ю.О., 2015. Реалізація індивідуального підходу до навчання та самореалізація студентів економічних спеціальностей. *Педагогіка та психологія*, 51, с. 22-28.

Євтушевський, В.А., 2002. Економічна освіта у вищій школі: здобутки та перспективи формування. *Вища освіта України,* 2, с. 86-91.

Єршов, М.-О., 2018. Роль української ІТ-освіти на світовому ринку інформаційних товарів і послуг. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка,* 16, с. 74-81. DOI: http://doi.org/10.32835/2223-5752.2018.16.74-81.

Єршова, Л., 2015. Формування референтної особистості як проблема освітньої практики сучасної України. Вісник Черкаського університету. Серія: *Педагогічні науки,* 6, с. 119-124.

Єршова, Л., 2018a. Від купця – до підприємця: трансформація цінностей української економічної еліти у XIX – на початку XX століття. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка,* 15, с. 154-161. https://doi.org/10.32835/2223-5752.2018.15.

Єршова, Л., 2018b. Трансформація системи цінностей учнівської і студентської молоді в контексті реформування вітчизняної професійної освіти. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка,* 16, с. 162-168. DOI: http://doi.org/10.32835/2223-5752.2018.16.162-168.

Закатнов Д., 2007. Організаційно-педагогічне забезпечення підготовки учнівської молоді до планування кар'єри. *Теоретико-методичні проблеми виховання дітей та учнівської молоді,* 10 (II), с. 373-380.

Закатнов, Д.О., 2009. Стан і проблеми професійної орієнтації. *Професійно-технічна освіта: інноваційний досвід, перспективи,* 1(6), с. 173-179.

Закатнов, Д., 2015. Профорієнтаційні засади кар'єрного розвитку учнівської молоді. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка,* 9, с. 86-94.

Кабінет Міністрів України, 2019. Постанова Кабінету Міністрів України *«Про затвердження переліку галузей знань та спеціальностей, за якими здійснюється підготовка здобувачів вищої освіти».* [online] (Останнє оновлення 06 Червень 2019) Доступно: <http://www.kmu.gov.ua/control/ru/cardnpd?docid=248149695> [Дата звернення 11 Травень 2019].

Ковальчук, Г.О., 1999. Активізація навчання в економічній освіті. *Навчальний посібник*. Київський національний економічний університет. К.: КНЕУ.

Лемешко Л., Формування художньо-творчої компетентності техніків-конструкторів одягу як проблема професійної педагогіки. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка,* 16, с. 100-104. https://doi.org/10.32835/2223-5752.2018.16.100-104.

Майковська, В.І., 2017. Сутність і структура підприємницької компетентності майбутніх фахівців в Україні. *Вісник Житомирського державного університету імені Івана Франка.* 1, с. 112-117.

Однорог, Г., 2018. Теоретичні засади формування ключових компетентностей учнів у закладах професійної освіти засобами інтерактивних технологій. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка,* 16, с. 104-108. https://doi.org/10.32835/2223-5752.2018.16.104-108.

Поясок, Т.Б, 2003. Принципи відбору змісту психолого-педагогічної підготовки майбутніх економістів. *Неперервна професійна освіта: Теорія і практика,* 1, с. 200-204.

Радкевич, В., 2016. Теоретичні та методичні засади розвитку професійної освіти і навчання: результати, проблеми, перспективи. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка,* 11, с. 5-22.

Радкевич, О.П., 2012. Особливості правового регулювання мережі Інтернет. *Право та управління,* 1, с. 436-443.

Ткаленко, Н.В., 2011. Проблеми підготовки сучасних економістів у системі вищої освіти. *Науковий вісник ЧДІЕУ,* 3 (11), с. 31-35.

Хизрич, Р. и Питерс, М., 1992. *Предпринимательство, или как завести собственное дело и добиться успеха. Вып.1. Предприниматель и предпринимательство.* Перевод с английского И. И. Андреева, Е. Н. Николаенко. М.: Прогресс-Универс.

Яблуновська, К., 2018. Теоретичні основи формування екологічної компетентності майбутніх викладачів аграрних закладів вищої освіти. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка,* 15, с. 47-53. https://doi.org/10.32835/2223-5752.2018.15.47-53.

Yershov, M.-O., 2019. Digitalisation of professional (vocational) and pre-high tertiary education of Ukraine: problems and prospects. *Scientific herald of the Institute of vocational education and training of NAES of Ukraine. Professional Pedagogy,* 1(18), pp. 67-74. https://doi.org/10.32835/2223-5752.2019.18.67-74.

Translated & Transliterated

Bazeliuk, O., 2018. Zmist i struktura tsyfrovoi kultury pedahohichnykh pratsivnykiv zakladiv profesiinoi osvity [Content and structure of digital culture of VET institutions' teachers]. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPS Ukrainy. Profesiina pedahohika [Scientific herald of the Institute of vocational education and training of NAES of Ukraine. Professional Pedagogy]*, 16, s. 81-87. DOI: http://doi.org/10.32835/2223-5752.2018.16.81-87, [in Ukrainian].

Vasyltsiv, T.H., 2009. Udoskonalennia derzhavnoho rehuliuvannia pidpryiemnytskoi diialnosti v Ukraini [Improvement of state regulation of business activity in Ukraine]. *Stratehichni priorytety [Strategic priorities]*. 1(10), s.145-149, [in Ukrainian].

Verkhovna Rada Ukrainy. Zakonodavstvo Ukrainy [Verkhovna Rada of Ukraine. Legislation of Ukraine], 2003. *Kontseptsiia rozvytku ekonomichnoi osvity v Ukraini [The concept of economic education development in Ukraine]*. [online] Dostupno: <https://zakon.rada.gov.ua/rada/show/v12_7290-03/sp:max25> [Data zvernennia 09 hrudnia 2019], [in Ukrainian].

Verkhovna Rada Ukrainy. Zakonodavstvo Ukrainy [Verkhovna Rada of Ukraine. Legislation of Ukraine], 2014. *Zakon Ukrainy «Pro vyshchu osvitu» [The Law of Ukraine about «High Education»]*. [online] (Ostannie onovlennia 06 Cherven 2019) Dostupno: <http://zakon5.rada.gov.ua/laws/show/1556-18>. [Data zvernennia 10 Travnia 2019], [in Ukrainian].

Haiduchenko, Yu.O., 2015. Realizatsiia indyvidualnoho pidkhodu do navchannia ta samorealizatsiia studentiv ekonomichnykh spetsialnostei [Implementing an individual approach to training and self-realization of economics students]. *Pedahohika ta psykholohiia [Pedagogics and Psychology]*, 51, s. 22-28, [in Ukrainian].

Yevtushevskyi, V.A., 2002. Ekonomichna osvita u vyshchii shkoli: zdobutky ta perspektyvy formuvannia [Economic education in higher education: achievements and prospects of formation]. *Vyshcha osvita Ukrainy [High education in Ukraine],* 2, s. 86-91, [in Ukrainian].

Yershov, M.-O., 2018. Rol ukrainskoi IT-osvity na svitovomu rynku informatsiinykh tovariv i posluh [The role of Ukrainian IT education in the world market of information products and services]. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPS Ukrainy. Profesiina pedahohika [Scientific herald of the Institute of vocational education and training of NAES of Ukraine. Professional Pedagogy],* 16, s. 74-81. DOI: http://doi.org/10.32835/2223-5752.2018.16.74-81, [in Ukrainian].

Yershova, L., 2015. Formuvannia referentnoi osobystosti yak problema osvitnoi praktyky suchasnoi Ukrainy [The reference individual formation as a problem of the educational practices in modern Ukraine]. *Visnyk Cherkaskoho universytetu. Seriia: Pedahohichni nauky [Cherkasy university bulletin: Pedagogical sciences],* 6, s. 119-124, [in Ukrainian].

Yershova, L., 2018. Vid kuptsia – do pidpryiemtsia: transformatsiia tsinnostei ukrainskoi ekonomichnoi elity u XIX – na pochatku XX stolittia [From a tradesman to an entrepreneur: the Ukrainian business leaders' values transformation in XIX and early XX centuries]. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPS Ukrainy. Profesiina pedahohika [Scientific herald of the Institute of vocational education and training of NAES of Ukraine. Professional Pedagogy],* 15, s. 154-161, [in Ukrainian].

Yershova, L., 2018. Transformatsiia systemy tsinnostei uchnivskoi i studentskoi molodi v konteksti reformuvannia vitchyznianoi profesiinoi osvity [Transformation of the students' values system in the context of domestic vocational education and training reforming]. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPS Ukrainy. Profesiina pedahohika [Scientific herald of the Institute of vocational education and training of NAES of Ukraine. Professional Pedagogy],* 16, s. 162-168. DOI: http://doi.org/10.32835/2223-5752.2018.16.162-168, [in Ukrainian].

Zakatnov, D.O., 2007. Orhanizatsiino-pedahohichne zabezpechennia pidhotovky uchnivskoi molodi do planuvannia kariery [Organizational and pedagogical support of training pupils to build a career]. V: *Teoretyko-metodychni problemy vykhovannia ditei ta uchnivskoi molodi: zb. nauk. pr. [Theoretical and methodical problems in character building of children and pupils]*. K.: In-t problem vykhovannia APN Ukrainy, s. 373-380, [in Ukrainian].

Zakatnov, D.O., 2009. Stan i problemy profesiinoi oriientatsii [The conditions and problems of professional orientation]. *Profesiino-tekhnichna osvita: innovatsiinyi dosvid, perspektyvy [Professional (vocational) education: an innovative experience and prospects],* 1(6), s. 173-179, [in Ukrainian].

Zakatnov, D., 2015. Proforiientatsiini zasady kariernoho rozvytku uchnivskoi molodi [Professional orientation and proforientologic competences concerning vocational self-determination and career development of young students]. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPS Ukrainy. Profesiina pedahohika [Scientific herald of the Institute of vocational education and training of NAES of Ukraine. Professional Pedagogy],* 9, s. 86-94, [in Ukrainian].

Kabinet Ministriv Ukrainy [Cabinet of Ministers of Ukraine], 2019. *Postanova Kabinetu Ministriv Ukrainy «Pro zatverdzhennia pereliku haluzei znan ta spetsialnostei, za yakymy zdiisniuietsia pidhotovka zdobuvachiv vyshchoi osvity» [Decree the cabinet of Ministers of Ukraine about «Approval of the list of disciplines and specialties, which are trained candidates of High Education»]*. [online] (Ostannie onovlennia 06 Cherven 2019) Dostupno: <http://www.kmu.gov.ua/control/ru/cardnpd?docid=248149695> [Data zvernennia 11 Traven 2019], [in Ukrainian].

Kovalchuk, H.O., 1999. *Aktyvizatsiia navchannia v ekonomichnii osviti: navchalnyi posibnyk [Start training in economic education: tutorial]*. Kyivskyi natsionalnyi ekonomichnyi universytet [Kyiv National University of Economics]. K.: KNEU, [in Ukrainian].

Lemeshko L., 2018. Formuvannia khudozhno-tvorchoi kompetentnosti tekhnikiv-konstruktoriv odiahu yak problema profesiinoi pedahohiky [Forming clothes technicians-constructors' arts– creative competence as a professional pedagogy problem]. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPN Ukrainy. Profesiina pedahohika [Scientific herald of the Institute of vocational education and training of NAES of Ukraine. Professional Pedagogy]*, 16, s. 100-104. https://doi.org/10.32835/2223-5752.2018.16.100-104, [in Ukrainian].

Maikovska, V.I., 2017. Sutnist i struktura pidpryiemnytskoi kompetentnosti maibutnikh fakhivtsiv v Ukraini [The meaning and structure of entrepreneurial competence of future specialists in Ukraine]. *Visnyk Zhytomyrskoho derzhavnoho universytetu imeni Ivana Franka [Journal of Zhytomyr Ivan Franko University]*. 1, s. 112-117, [in Ukrainian].

Odnoroh, H., 2018. Teoretychni zasady formuvannia kliuchovykh kompetentnostei uchniv u zakladakh profesiinoi osvity zasobamy interaktyvnykh tekhnolohii [The essence and structure of key competencies of future skilled sewing workers]. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPN Ukrainy. Profesiina pedahohika [Scientific herald of the Institute of vocational education and training of NAES of Ukraine. Professional Pedagogy]*, 16, s. 104-108. https://doi.org/10.32835/2223-5752.2018.16.104-108, [in Ukrainian].

Poiasok, T.B, 2003. Pryntsypy vidboru zmistu psykholoho-pedahohichnoi pidhotovky maibutnikh ekonomistiv [Some principles of selecting the content of psycho-pedagogical training for future economists]. *Neperervna profesiina osvita: teoriia i praktyka [Unstoppable professional development: theory and practice]*, 1, s. 200-204, [in Ukrainian].

Radkevych, V., 2016. Teoretychni ta metodychni zasady rozvytku profesiinoi osvity i navchannia: rezultaty, problemy, perspektyvy [Theoretical and methodological basis of VETdevelopment: results, problems, prospective]. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPN Ukrainy. Profesiina pedahohika [Scientific herald of the Institute of vocational education and training of NAES of Ukraine. Professional Pedagogy],* 11, s. 5-22.

Radkevych, O.P., 2012. Osoblyvosti pravovoho rehuliuvannia merezhi Internet [Features of legal regulation of the Internet]. *Pravo ta upravlinnia [Law and Management],* 1, s. 436-443, [in Ukrainian].

Tkalenko, N.V., 2011. Problemy pidhotovky suchasnykh ekonomistiv u systemi vyshchoi osvity [Some issues in the training of modern economists in higher education]. *Naukovyi visnyk ChDIEU [Scientific Journal Chernihiv Economic University],* 3 (11), s. 31-35, [in Ukrainian].

Hizrich, R. i Piters, M., 1992. *Predprinimatelstvo, ili kak zavesti sobstvennoe delo i dobitsya uspeha. Vyp. 1. Predprinimatel i predprinimatelstvo [Entrepreneur and business, or how to seduce their own work and profit. You & business; Vyp. 1]*. Perevod s angliyskogo I. I. Andreeva, E. N. Nikolaenko. M.: Progress-Univers, [in Ukrainian].

Yablunovska, K., 2018. Teoretychni osnovy formuvannia ekolohichnoi kompetentnosti maibutnikh vykladachiv ahrarnykh zakladiv vyshchoi osvity [Theoretical bases of forming the ecological competence of the agrarian higher education institutions' future academic staff]. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPN Ukrainy. Profesiina pedahohika [Scientific herald of the Institute of vocational education and training of NAES of Ukraine. Professional Pedagogy],* 15, s. 47-53. https://doi.org/10.32835/2223-5752.2018.15.47-53, [in Ukrainian].

Yershov, M.-O., 2019. Digitalisation of professional (vocational) and pre-high tertiary education of Ukraine: problems and prospects. *Scientific herald of the Institute of vocational education and training of NAES of Ukraine. Professional Pedagogy,* 1(18), pp. 67-74. https://doi.org/10.32835/2223-5752.2019.18.67-74, [in English].

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Проблеми і перспективи формування підприємницької компетентності майбутніх бакалаврів з економіки підприємства у процесі фахової підготовки

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Реферат. *Актуальність* дослідження зумовлена інтенсивним розвитком вищої економічної освіти в Україні та гострим запитом суспільства й вітчизняної економіки на підготовку фахівців, готових до реалізації професійної кар'єри в умовах розвитку малого бізнесу.

Мета: виявити й охарактеризувати сучасні проблеми і перспективи формування підприємницької компетентності майбутніх бакалаврів з економіки підприємства у процесі фахової підготовки.

Методи: класичний аналіз офіційних документів і наукових праць з формування і розвитку підприємницької компетентності: зовнішній аналіз (сприяв урахуванню історичних обставин створення відібраних документів як елементів певної системи суспільно-економічних відносин, визначенню його важливості та ефективності з огляду на визначену проблематику дослідження); внутрішній аналіз (зосереджувався на змісті джерела, сприяв виявленню проблем і перспектив формування підприємницької компетентності майбутніх фахівців у процесі фахової підготовки в закладах).

Результати. Показано, що сучасні науковці мають різні погляди на поняття "підприємництво", але сходяться на думці про те, що успішність підприємницької діяльності залежить від рівня сформованості у випускників підприємницької компетентності. З'ясовано, що в нинішніх умовах економіст-бакалавр повинен мати сформований науковий світогляд та широку ерудицію, демонструвати високу загальну культуру й належні моральні якості, володіти розвиненою підприємницькою компетентністю, постійно підвищувати рівень свого професіоналізму з урахуванням потреб економічного розвитку України. Виявлено, що здебільшого підприємницьку компетентність розуміють як сукупність особистісних і ділових якостей, навичок, знань, модель поведінки, володіння якими допомагає успішно вирішувати певні економічні завдання й досягати високих результатів діяльності.

Висновки: визначено основні проблеми формування підприємницької компетентності майбутніх бакалаврів з економіки підприємства (невмотивованість студентів до вияву підприємницької ініціативи; недостатній рівень формування готовності до підприємницької діяльності; незадовільний рівень сформованості підприємницької компетентності; недосконаліть освітньої програми; наявність дисбалансу між професійними та ключовими компетентностями); окреслено перспективи формування підприємницької компетентності майбутніх бакалаврів з економіки підприємства (реформування системи національної освіти; розроблення і впровадження авторських програм з економічних дисциплін; введення у освітню програму спецдисциплін і спецкурсів, що сприятимуть формуванню підприємницької компетентності; діджиталізація вищої освіти; впровадження прогресивного зарубіжного досвіду формування готовності до підприємницької діяльності у практику вітчизняних ЗВО).

Ключові слова: *підприємництво, економіка підприємства, компетентність, підприємницька компетентність, бакалавр.*

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Part II

METHODOLOGICAL FUNDAMENTALS OF FUTURE SPECIALISTS' PROFESSIONAL TRAINING

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INTERACTIVE EDUCATIONAL TECHNOLOGIES IN THE TRAINING OF A FUTURE BIOLOGY TEACHER FOR SPECIALIZED SCHOOL

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Abstract.

The relevance of the study is determined by the integration of Ukraine into the European educational system, reforms of secondary education, the transition to specialized education in high school, the growing requirements to vocational training of graduates of higher education institutions, the need to change from the traditional academic style of teaching disciplines to innovation.

The *aim* is to generalize scientific, educational-methodical sources and personal practical experience of using interactive pedagogical techniques in forming the professional competence of the Biology teacher of the specialized school.

Methods used in the research include theoretical (analysis of scientific and pedagogical sources, articles, abstracts, dissertations, Internet resources; synthesis and generalization of factual material; comparison and classification) and empirical methods (pedagogical observation, questioning, interviews with students).

The results. The role of interactive techniques in teacher's training has been analyzed; it is noted that the organization of education on a competence approach is based on strengthening of practical professional orientation of education, development of students' pedagogical abilities and values. The author has implemented the preparation of the future Biology teacher of the specialized school at the second (master's) level of higher education while teaching the course «Theory and Methods of Teaching Biology at the Senior Specialized School». In the course of practical training, group work and interactive learning, which takes place under the condition of the continuous, active interaction of all its participants, are preferred. Moreover, a teacher and a student are equal participants of the educational process. It is mentioned that one of the most effective organizational forms of online learning is training. The author describes at large the methodology of conducting the training «Interactive Techniques of Teaching Biology», which introduces students to training techniques, various innovative methods and techniques of interactive learning, and forms practical skills necessary for their future professional activity.

Anonymous questionnaires of the master-graduates, the future teachers of Biology, Chemistry and the Fundamentals of Human Health have been conducted. The respondents have been asked to rate on a five-point scale the effectiveness of a method, a form, a teaching technique in forming their readiness to work at a specialized school. The analysis of the results of the study is carried out on the basis of the technique of relative frequencies developed by O. Smirnov. Students consider the school practice to be the most effective, while being combined with teacher's mentoring; and they express their preference to have it at specialized classes or educational institutions. The respondents highly appreciate trainings, master classes of experienced teachers, contextual trainings, a creation of their own methodological portfolio and a case study.

Conclusions. Training the modern teacher of the specialized school should be carried out due to the strengthening of the practical component of educational programs. Special attention should be paid to on-the-job (pedagogical) practices in general secondary education institutions with specialized classes. The classroom work with students is effective if the various interactive educational techniques, including trainings, are used; it is promising to involve experienced practicing teachers in the educational process of training future teachers in higher educational institutions.

Keywords: *interactive teaching techniques, training, Biology teacher training, specialized school.*

Introduction. Due to Ukraine's integration into the European educational system, the requirements for vocational training of graduates of higher education institutions are increasing today. The National Agency for Higher Education Quality Assurance established in the country has started the process of educational programs accreditation, based on the principles of trust, mutual demand, culture of quality and integrity. The challenge is to create all the conditions for learning; personal and professional development of students; formation of their professional competence, creativity, as well as social skills namely communication, ability to take responsibility, work in a team, manage their time, think logically and critically, make their own decisions, etc. Requirements for teacher's training have also increased in connection with the secondary education reforms, as well as the transition to specialized education in the high school, as reflected in the Conceptual Framework for Secondary School Reform: The New Ukrainian School. Currently the higher education institutions face the challenge whether they are able to move from the traditional academic style of teaching to innovation, from the focus on knowledge, skills and competencies to the formation of competencies.

The analysis of scientific-pedagogical sources, personal pedagogical experience of working in the higher educational institution and the school, as well as interviews with higher education applicants indicate that the most effective methods and techniques of forming the future teacher's professional competence are interactive educational techniques (trainings, group methods, discussions, debates, business and didactic games, etc.); case study or a case analysis method; a portfolio; information and communication technologies, contextual and dual learning. In our opinion, interactive teaching in the context of future teacher's preparation is the basic educational technique.

Sources. Recently the content, ways, methods and techniques of training the Biology teacher of the specialized school have become the subject of fundamental scientific research. Thus, N. Shyian's (2015) scientific research is devoted to the theory and practice of specialized education in rural schools (for example, the study of Chemistry and partly Biology). V. Onipko's (2011) monograph substantiates the methodological, theoretical and organizational principles of preparing a Natural Science teacher to work in the specialized school; in particular to the implementation of the biotechnological profile of training. H. Hritsai's (2016) studies cover the field of methodological training of a future Biology teacher, and Y. Shapran's research works (2013) are related to their professional competence. Our scientific research is also aimed at finding effective ways and techniques of forming specialized profile-oriented competence of the Biology teacher, which continuously takes place at the bachelor's and master's levels of higher education and continues in the system of postgraduate pedagogical education (Melnychenko, 2019).

In the last decade, interactive educational techniques and teaching methods have been increasingly implemented in the higher education (Kashlev, 2005; Piatakova, 2008) and adult education (Sysoieva, 2011). The authority in the field of interactive learning is O. Pometun (Pometun and Pyrozhenko, 2002; Pometun, 2007), whose scientific and methodological achievements are used by the secondary and high schoolteachers. Many useful methodological developments, interesting examples of interactive techniques, case studies, techniques of development of critical thinking used by experienced practicing teachers can be found on the educational platform "To the Lesson" (https://naurok.com.ua/). However, the problem of training Biology teachers to the work in the specialized school remains relevant and requires finding new ways to solve it, including with help of interactive educational techniques.

The aim of the article is to summarize scientific, educational and methodological sources and personal practical experience of using interactive pedagogical techniques in forming the professional competence of the Biology teacher of the specialized school.

Research methods: theoretical (analysis of scientific and pedagogical sources, articles, abstracts, dissertations, Internet resources; synthesis and generalization of factual material; comparison and classification) and empirical methods (pedagogical observation, questionnaires, interviews with higher education applicants)

Results and discussion. The content of the professional training of the Biology teacher of the specialized school is implemented in the higher educational institutions at the bachelor and master's levels of higher education and is continued in the system of postgraduate pedagogical education. The main purpose of such training is the formation of professional competence of the Biology teacher of the specialized school, that helps them successfully carry out daily professional activity in the conditions of the profile training. The education process organization within a competence approach is based not only on the basic knowledge and skills, but also on strengthening the practical professional orientation of teaching, the development of pedagogical abilities and values of the future teacher.

We have implemented such training at the second (master's) level of higher education while teaching the author's course "Theory and Methods of Teaching Biology in the Senior Specialized School" higher

education applicants, program subject area 014.05 "Secondary Education (Biology and Human Health)" 3.5 ECTS credits in Zhytomyr Ivan Franko State University.

In the textbook, O. Pometun (2007, pp. 221) cites data, obtained by American researchers, on the effectiveness of various forms of learning. According to the so-called "student learning pyramid", the effectiveness of learning when using different forms and methods is different, namely: a lecture-monologue – 5%; independent reading – 10; the use of audio and video training – 20; a demonstration – 30; a discussion of the educational material in a small group – 50; a practice in the process of activity – 75; teaching others – 90%. That is why practical training organized with the usage of the interactive educational techniques is of a great importance while training the future teacher.

During the practical classes of the course "Theory and Methods of Teaching Biology in the Senior Specialized School" we use well-known pedagogical techniques (module, problem, game, interactive, project, training teaching). Students are grouped into micro-groups and do some individual and group tasks. The teacher controls their activities, consults, coordinates, corrects the work of future teachers, if necessary the teacher helps, answers questions, and promotes reflection of their activities. As recommended by S. Vitvytska (2009, pp. 146-147), the group work of undergraduates is organized according to a certain algorithm:

– setting a specific cognitive task, creating a problem situation, providing a case for analysis, etc.;

– dividing students into micro groups of 2-6 people;

– briefing on the content, the sequence and results of the work;

– working in groups (distribution of tasks between group members; individual performance of them; announcement of individual work results in the group; discussion of the overall group task, its generalization and supplementation by individual members; roles distribution for announcement of the group work results);

– final part: communication of the work results, reflection, conclusion about the work of the group and the success of the task.

In the practical classes on "Theories and Methods of Teaching Biology in the Senior Specialized School" we offer students tasks of different levels. For instance, *reproductive-level* tasks include analyzing the structure of a school program in Biology and Ecology, integrated science courses and elective courses; description of school textbooks; selection of control tasks for a specific topic; compilation of the necessary "professional minimum" in the Biological disciplines that is the basis of the school course in Biology (tasks of the External independent testing in Biology; test assignments on different topics of the school course in Biology in high school); filling the register; drawing up a plan for a school lecture and / or a seminar; selection of questionnaires to determine students' professional aptitudes and interests, as well as their psychophysiological characteristics; compilation of a bibliography of scientific and educational-methodical literature for work on a certain psychological-pedagogical or methodical research, etc.

The *assignments* of the c*onstructive level* include preparation of abstracts and multimedia presentations; selection of Biology textbooks for 10th and 11th grades on a competitive basis with argumentation; drawing up a synopsis of classes; tasks of final and current control of a certain educational topic for classes of different profiles and directions of study (chemical-biological, philological, mathematical); developing creative tasks for work with gifted students (Olympics tasks, high in complexity tasks, the international PISA program tasks); drawing up a plan for the research, social and information projects in Biology; visualization of educational material of various Biological topics (creation of reference schemes, tables, intelligence cards, flash cards, didactic cards, etc.); preparation of issues and questions of a problematic nature in the methodology of teaching Biology and the school course in Biology. Constructive level assignments are dominant in working with undergraduates.

The *creative level assignments* are offered to undergraduates with sufficient and high level of professional knowledge and methodological skills and expressed intrinsic motivation for professional activity. This types of tasks includes, for example, conducting a lesson and drawing a supporting syllabus to it; writing a conference report or an article in a collection or a journal; a speech at a scientific and practical conference of students and young scientists; development of a detailed organizational plan for Biology Week; methodical games development on different school Biology course topics taking into account the class specialization; drawing up a plan of the research work in Biology within the framework of the Junior Academy of Sciences and other.

As mentioned above, *interactive training* is preferred during laboratory and practical classes. The word "interactive" comes from English "interact", where "inter" means mutual and "act" – do something. Most scholars (Kashlev, 2005; Pometun, 2007; Piatakova, 2008) emphasize that learning is thought to be interactive when the educational process takes place under the condition of continuous, active interaction of all its participants; an educator and a student (a student, a teacher in the process of upgrading peda-

gogical qualification, etc.) are equal participants of the educational process. Due to these activities, the atmosphere of interaction and cooperation is created in the classroom. Students learn to think critically, make their own well-thought-out decisions, participate in discussions, and communicate with others. Interactive learning is a special form of a cognitive activity organization that creates comfortable learning conditions, when everyone feels their success, intellectual abilities.

Belarusian teacher S. Kashlev (2005, pp. 31) emphasizes that interactive learning is a process of the interpersonal communication, characterized by a high degree of intensity of the communication, variety of types, forms and techniques of activities, a purposeful reflection and a mutual influence. Its essence is to reveal the creative potential of students in the conditions of the free and productive brain activity, the creative atmosphere of the interaction between the teacher and students.

There are different approaches or criteria for classifying interactive teaching methods. We use the classification developed by O. Pometun and L. Pyrozhenko (2002), who, depending on the purpose of employment and the form of the educational activity organization, distinguish four groups of interactive learning techniques. We offer the specific methods for each group:

1) interactive cooperative learning techniques (working in pairs, rotary triples, small groups, O. Rivin's theme transfer method, E. Mazur's mutual learning method, "carousel", "aquarium", etc.);

2) interactive techniques of cooperative group learning ("microphone", "snow ball", unfinished sentences, Bloom's cube, "brainstorming", "circle of ideas", "openwork file", "Brownian motion");

3) situational modeling techniques (imitation and role-playing games, simulation, analysis of life situations, case studies, dramatization, etc.);

4) discussion questions techniques (PRESS method, SWOT-analysis, take a stand, discussion, "six hats" by E. de Bono).

We work out these local interactive pedagogical techniques in the practical classes of the course "Theory and Methods of Teaching Biology in the Senior Specialized School". For the efficiency of work at the beginning of studying the course (paired lesson №3-4) we conduct 2-3-hour training "Interactive Techniques of Teaching Biology". First of all its purpose is to introduce students to a training technique, as well as various methods of interactive learning, to form practical skills of their use in the future professional activity.

Training is one of the most effective organizational forms of online learning. The word "training" comes from the English "to train" – "to teach, to develop and to improve". Training appeared as a method of the psychotherapeutic work in the 19th century, and subsequently spread in the vocational education and psychology as an effective technique for the personal development and then was applied in institutions of higher and secondary education. Training is proved to contribute to the intensity of learning, the result of which is achieved through the active work of its participants. Knowledge is not presented in a ready form, but becomes a product of the active cooperation of the participants. The focus is on participants' self-study and intensive interaction. Training is considered, on the one hand, to be an active organizational form of educational work, which relies on the experience and knowledge of participants, active practical pedagogical and psychological methods. On the other hand, training is the interactive learning technique with a distinct structure and attributes that is well reproduced and guarantees high quality of the educational process and the achievement of practical results.

Training is based on well-established common principles such as the activity, the open feedback, the experimentation and the creativity, trust in the communication, the equality of positions. The aim of training is to improve its participants' life and professional skills, competences, to find ways to solve specific problems ect. That is why training is a leading form of the teaching process organization while studing Fundamentals of Human Health, is expedient in the study of Biology and Ecology, which are the main subjects in the formation process of key competences in Natural Sciences and Technologies, Environmental Literacy and Healthy Living (Melnychenko, Polishchuk, 2019).

We believe that while studying at the higher educational institutions students should participate in various trainings, mastering this technique from the inside out as participants. In studying the teaching methods of these subjects, the future Biology teachers conduct trainings during practical classes in the modeling class, as well as during the pedagogical practice.

Attributes of the training are: 1) a training group (10-15 persons involved by active coaching in the active communication and solving tasks); 2) a coach – a person who is an equal participant of the training group and, at the same time, a trainer who has knowledge of the topic of training and the skills of conducting training sessions; 3) a specially equipped room and equipment (chairs arranged in a circle or a semicircle, some space for movement, markers, a magnetic board, handouts, paper, etc.); 4) the rules of the group, which are clearly announced at the beginning of the training, observed by the participants

and provide comfortable conditions for training (Melnychenko, Polishchuk, 2019).

The structure and objectives of the training undergraduates of the speciality 014.05 "Secondary Education (Biology and Human Health)" are demonstrated in *table 1*.

The main part of the training is the most important and can include a variety of topics such as project activities, ICT training technologies, the development of critical thinking in Biology lessons, health-saving technologies, the formation of environmental culture, etc. It is the skill of the trainer-teacher that determines its filling and effectiveness of trainings. It is advisable to use the training form of work to improve the professional skills of teachers.

In order to determine the effectiveness of the use of certain educational techniques and methods while training the Biology teacher of the specialized school, we have conducted an anonymous survey of master-graduates, future teachers of Biology, Chemistry and Fundamentals of Health of Zhytomyr Ivan Franko State University. The respondents (48 students) were asked to evaluate the effectiveness of one or another method (form, techninque) on a five-

Table 1.

The structure of the author's training "Interactive Techniques of Teaching Biology" for future Biology teachers of specialized school

Training stage, Duration	**Assigments and exercises**
I. Introduction (up to 15 min)	*Brainstorming:*The question is "What is Training – a Form, a Method or a Technique?" A report is about required attributes and a training structure. A) *"Acquaintance"* (1-2 exercises: "snow ball" – the first participant says his/her name and something he/she loves; the next one repeats the name and preferences of the first one and then names his/hers, etc.; "Acrosword" – participants write their names in a column on a piece of paper, opposite each letter they write a word that characterizes them, they attach the pieces of paper to their clothes as a name badge). B) *Adoption of training rules.* The rules can be written on a board, paper, drawn on pieces of paper that are alternately read, received and attached (for example, time appreciation, courtesy, address by the name, the rule of the raised hand, the rule of voluntariness, etc.). C) *Expectations*. Participants write down their expectations from the training and depict them graphically (for instance, "boats" and two river banks – hopes and accomplishments, "mushrooms" near the basket, etc.).
II. Main part 1.5 – 2 hours	A) *Grouping* (according to geometric shapes, a colour, seasons, an active exercise "molecule and atoms", etc.), communication exercises. B) *Group and individual work.* Students are offered a number of interactive techniques for working out methodical skills: – work on cases (certain problematic life situations written on a piece of paper that require collective discussion and solution); – exercises such as "Yes / No", "Take a position", "Border"; – Bloom's Cube of Thinking / Bloom's Taxonomy Questions (asking questions from a lower to a higher level of difficulty to encourage students to develop critical thinking); – "Brownian Movement" / "Carousel" / "Learning while Training" exercises (everyone receives printed information about an interactive teaching method, moves freely, trying to tell others and memorizing new information themselves); – exercises to visualize information. The groups depict graphically obtained information from a course in Biology and Ecology (or methods of teaching them) in different ways – they make up a word cloud, an intellect map, a fish-bonn, a reference block diagram, a spidergram; – exercises for the development of critical thinking: the Six Hats method by E. Bono; SWOT – analysis of phenomena, factors (S – strengths, W -weaknesses, O – opportunities, T – threats); – training practice. The representative of each group, using supplements, conducts some stage of training: grouping, acquaintance, expectations, movements, reflection, completion. C) *Exercises to relieve muscle and mental strain* alternate with group work. These are various active exercises ("Australian rain")
III. Completion (15-20 min)	A) *Reflection exercises* ("microphone" method; analysis of own expectations at the beginning of the training; writing a cinquain). B) T*he results are summarized* by the trainer. C) *Completion of the training*: "Wreath of Wishes", "We are good fellows!"

point scale (from 1 – absolutely uneffective, to 5 – the best, ideal) while forming their readiness to work in the specialized school.

An analysis of the study results on the basis of the relative frequencies technique by O. Smirnov (1990) is presented in *Fig. 1.*

Therefore, undergraduates think that the most effective for their readiness to work in the specialized school is a practice at the general secondary education institutions, which is combined with a teacher's guidance (0.91). The students mention that they would like to take it at specialized educational institutions or classes. In addition to this the respondents highly rate trainings, master classes of experienced teachers (0.85 and 0.81 respectively). They also positively rate contextual learning (0.73), creation of own methodical portfolio and a case technique (0.68).

Conclusions. The training of the modern teacher of the specialized school should be carried out with the strengthening of the practical component of educational programs. Particular attention should be paid to the on-the-job (pedagogical) practices in the general secondary education institutions with specialized classes. Classroom work with students is effective due to the use of a variety of interactive educational techniques, including trainings. It is promising to involve experienced teachers in the educational process of training future teachers in the higher educational institutions.

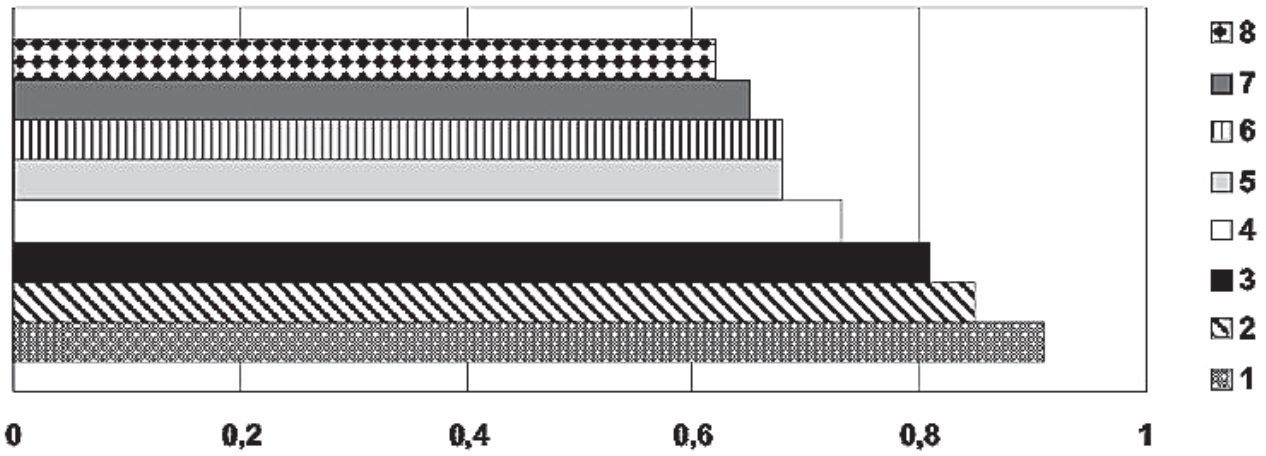

Fig. 1. Effectiveness of application of certain forms, methods and techniques in the training of a Biology teacher of a specialized school (according to the data of students' self-assessment):

1 – on-the-job practice in a school, teacher's mentoring; 2 – methodological trainings; 3 – master classes from practicing teachers; 4 – contextual learning (conducting lessons and their fragments at university classes); 5 – a personal methodical portfolio creation, 6 – a case study (a method of modeling life situations); 7 – multimedia lectures with the demonstration of lessons video clips; 8 – seminars.

List of references

Вітвицька, С. С., 2009. Технологія педагогічної підготовки магістрів в умовах ступеневої освіти. В:О. А. Дубасенюк, ред. *Професійна педагогічна освіта: інноваційні технології та методики.* Житомир: Вид-во ЖДУ ім. І. Франка. с. 133-152.

Грицай, Н. Б., 2016. *Теорія і практика методичної підготовки майбутніх учителів біології*: монографія. Рівне: О. Зень.

Кашлев, С. С., 2005. *Технология интерактивного обучения*. Минск: Белорусский верасень.

Урядовий портал, 2019. Концептуальні засади реформування середньої школи. Нова українська школа.[online] (Останнє оновлення 12 Грудень 2019) Доступно:<https://www.kmu.gov.ua/storage/app/media/reforms/ukrainska-shkola-compressed.pdf>[Дата звернення 12 Грудня 2019].

Мельниченко, Р. К. та Поліщук, Н. М., 2019. Тренінг як форма інтерактивної педагогічної технології та його роль у підготовці вчителя біології та основ здоров'я. *Проблеми освіти*: зб. наук.пр. ДНУ «Інститут модернізації змісту освіти», 92, с. 63-67.

Оніпко, В. В., 2011. *Професійна підготовка вчителя природничих дисциплін до роботи у профільній школі:* монографія. Полтава: ПНПУ імені В. Г. Короленка.

Пометун, О., 2007. *Енциклопедія інтерактивного навчання*. Київ: СПД Кулінічев.

Пометун, О. та Пироженко, Л., 2002. *Інтерактивні технології навчання*: теорія, практика, досвід: метод. посібн. Київ: АПН.

П'ятакова, Г. П., 2008. *Технологія інтерактивного навчання у вищій школі*: навч.-метод. посіб. Львів: Видавничий центр ЛНУ ім. І. Франка.

Сисоєва, С. О., 2011. *Інтерактивні технології навчання дорослих:* навчально-методичний посібник. НАПН України, Ін-т педагогічної освіти і освіти дорослих. Київ: ВД «ЕКМО».

Смирнов, А. В. и Смирнов Р. А., 1990. Статистическая обработка анкет, содержащих бальные шкалы. В: *Резервы интенсификации учебно-воспитательного процессы педвузов*. Кострома: КГПИ, с. 117-124.

Шапран, Ю. П., 2013. *Формування професійної компетентності майбутніх учителів біології*: монографія. Переяслав-Хмельницький: «Видавництво К С В».

Шиян, Н. І., 2004. *Профільне навчання у школах сільської місцевості*: теорія і практика. Полтава: ACMI.

Melnychenko, R. K., 2019. Substantian of the professional competence structure of Biology teacher at specialized school. *Zhytomyr Ivan Franko State University Journal. Pedagogical Sciences*, 3 (98), pp. 22-33. DOI 10.35433/pedagogy. 3 (98). 2019, c. 22-33.

Translation and Transliteration

Vitvytska, S. S., 2009. Tekhnolohiia pedahohichnoi pidhotovky mahistriv v umovakh stupenevoi osvity [Technology of Pedagogical Training of Masters in the Conditions of the Degree Education]. V: O. A. Dubaseniuk, red. *Profesiina pedahohichna osvta: innovatsiini tekhnolohii ta metodyky* [*Professional teacher education: innovative technologies and methods]*. Zhytomyr: Vyd-vo ZhDU im. I. Franka. s. 133-152, [in Ukrainian].

Hrytsai, N. B., 2016. *Teoriia i praktyka metodychnoi pidhotovky maibutnikh uchyteliv biolohii*: monohrafiia [*Theory and Practice of Methodical Training of Future Teachers of Biology*: monograph]. Rivne: O. Zen, [in Ukrainian].

Kashlev, S. S., 2005. *Tehnologiya interaktivnogo obucheniya [Interactive Learning Technique*]. Minsk: Belorusskij verasen, [in Belarusian].

Uriadovyi portal [Government portal], 2019. Kontseptualni zasady reformuvannia serednoi shkoly. *Nova ukrainska shkola [Conceptual Principles of Secondary School Reform. New Ukrainian School]*. [online] (Ostannie onovlennia 12 Hruden 2019) Dostupno: <https://www.kmu.gov.ua/storage/app/media/reforms/ukrainska-shkola-compressed.pdf> [Data zvernennia 12 Hruden 2019], [in Ukrainian].

Melnychenko, R. K. ta Polishchuk, N. M., 2019. Treninh yak forma interaktyvnoi pedahohichnoi tekhnolohii ta yoho rol u pidhotovtsi vchytelia biolohii ta osnov zdorovia *[Training as a Form of the Interactive Pedagogical Technique and its Role in the Training of Teachers of Biology and Fundamentals of Human Health]*. Problemy osvity [Educational problems]: zbirnyk naukovykh prats DNU «Instytut modernizatsii zmistu osvity», 92, s. 63-67, [in Ukrainian].

Onipko, V. V., 2011. *Profesiina pidhotovka vchytelia pryrodnychykh dystsyplin do roboty u profilnii shkoli : monohrafiia [Professional Training of Natural Science Teacher to work in Specialized School]*. Poltava: PNPU imeni V. H. Korolenka, [in Ukrainian].

Pometun, O., 2007. *Entsyklopediia interaktyvnoho navchannia. [Encyclopedia of Interactive Learning]*. Kyiv: SPD Kulinichev [in Ukrainian].

Pometun, O.ta Pyrozhenko, L., 2002. *Interaktyvni tekhnolohii navchannia: teoriia, praktyka, dosvid [Interactive Learning Techniques: Theory, Practice, Experience]*: metod. posibn. Kyiv: APN, [in Ukrainian].

Piatakova, H. P., 2008. *Tekhnolohiia interaktyvnoho navchannia u vyshchii shkoli: navch.-metod. posib. [Interactive Learning Technique in Higher Education:an educational and methodological edition]*. Lviv: Видавничий центр ЛНУ ім. І. Франка, [in Ukrainian].

Sysoieva, S. O., 2011. *Interaktyvni tekhnolohii navchannia doroslykh:navchalno-metodychnyi posibnyk [Interactive Techniques for Adult Learning: an educational and methodological edition]*. NAPN Ukrainy, In-t pedahohichnoi osvity i osvity doroslykh. Kyiv: VD «EKMO», [in Ukrainian].

Smirnov, A. V. and Smirnov, R. A., 1990. *Statisticheskaya obrabotka anket, soderzhashih balnye shkaly [Statistical processing of questionnaires containing ball scales]*. V: Rezervy intensifikacii uchebno-vospitatelnogo processy pedvuzov [Reserves of Intensification of Educational Processes of Pedagogical Higher Educational Institutions]. Kostroma: KGPI, s. 117-124.

Shapran, Yu. P., 2013. *Formuvannia profesiinoi kompetentnosti maibutnikh uchyteliv biolohii : monohrafiia. [Formation of Professional Competence of Future Biology Teachers: monograph]*. Pereiaslav-Khmelnytskyi: «Vydavnytstvo K S V», [in Ukrainian].

Shyian, N. I., 2004. *Profilne navchannia u shkolakh silskoi mistsevosti: teoriia i praktyka [Profile Education at General School of Rural Area: Theory and Practice]*. Poltava : ASMI, [in Ukrainian].

Melnychenko, R. K., 2019. *Substantian of the Professional Competence Structure of Biology Teacher at Specialized School. Zhytomyr Ivan Franko State University Journal. Pedagogical Sciences,* 3 (98), pp. 22-33. DOI 10.35433/ pedagogy.3(98). 2019, s. 22-33, [in English].

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Інтерактивні освітні технології у підготовці майбутніх учителів біології профільної школи

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Актуальність дослідження зумовлена інтеграцією України в європейський освітній простір, реформою середньої освіти, переходом до профільного навчання у старшій школі, зростанням вимог до професійної підготовки випускників закладів вищої освіти, потребою переходу від традиційного академічного стилю викладання дисциплін до інновацій.

Мета: узагальнення наукових, навчально-методичних джерел і власного практичного досвіду застосування інтерактивних педагогічних технологій при формуванні професійної компетентності вчителів біології профільної школи.

Методи: теоретичні (аналіз науково-педагогічних джерел, статей, авторефератів, дисертацій, інтернет-ресурсів; синтез та узагальнення фактичного матеріалу; порівняння і класифікація) та емпіричні методи (педагогічне спостереження, анкетування, інтерв'ю зі здобувачами вищої освіти).

Результати: проаналізовано роль інтерактивних технологій у підготовці вчителів; зазначено, що організація освіти на компетентнісному підході базується на посиленні практичної професійної спрямованості навчання, розвитку педагогічних здібностей і ціннісних орієнтирів студентів. Автором реалізовано підготовку майбутніх учителів біології профільної школи на другому (магістерському) рівні вищої освіти під час викладання курсу "Теорія і методика викладання біології у старшій профільній школі". При проведенні практичних занять перевага надавалась груповій роботі й інтерактивному навчанню, що відбувається за умови постійної активної взаємодії всіх його учасників, а педагог і студент є рівноправними і рівнозначними суб'єктами освітнього процесу. Зазначено, що однією з найефективніших організаційних форм інтерактивного навчання є тренінг. Автором детально описано методику проведення тренінгу "Інтерактивні технології навчання біології", що знайомить студентів із тренінговою технологією, різноманітними інноваційними методиками і прийомами інтерактивного навчання, формує практичні навички їх застосування у майбутній професійній діяльності. Здійснено анонімне анкетування магістрів випускних курсів, майбутніх учителів біології, хімії та основ здоров'я. Респондентам пропонувалося оцінити за п'ятибальною шкалою ефективність того чи іншого методу, форми, освітньої технології у формуванні їхньої готовності до роботи у профільній школі. Аналіз результатів дослідження здійснювався на основі методики відносних частот О. Смірнова. З'ясовано, що студенти найбільш ефективною вважають практику в школах, котра поєднується з наставництвом учителя; висловлюють бажання проходити її у профільних класах чи навчальних закладах; високу оцінку респондентів отримали тренінги, майстер-класи від досвідчених вчителів, контекстне навчання, створення власного методичного портфоліо і кейс-навчання.

Висновки: підготовка сучасного вчителя профільної школи повинна здійснюватися з посиленням практичної складової освітніх програм; особливу увагу варто приділити виробничим (педагогічним) практикам у закладах загальної середньої освіти, що мають профільні класи; аудиторна робота зі студентами є ефективною за умови використання різноманітних інтерактивних освітніх технологій, у тому числі тренінгів; перспективним є залучення досвідчених педагогів-практиків до освітнього процесу підготовки майбутніх учителів у ЗВО.

Ключові слова: *інтерактивні освітні технології, тренінг, підготовка вчителів біології, профільна школа.*

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RELEVANT TECHNOLOGIES FOR DEVELOPING READINESS OF TEACHING STAFF FOR THE STANDARDIZATION OF JUNIOR SPECIALISTS' TRAINING

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Abstract:

Relevance: Professional training quality of prospective junior specialists mainly relies on teaching staff competence in professional training standards in colleges and technical schools.

Aim: The aim of this article is to determine the ways of implementing educational technologies to develop teaching staff competence in junior specialists' training standards.

Methods: A number of theoretical methods were used in this research including the analysis and the synthesis (to identify the current issue research level), summary (to make conclusions and recommendations).

Results: The implementation of this type of training system is based on educational methods including structural, logical, integrative, play-based, dialogic and other teaching techniques.

The authors briefly mention the educational technologies which are relevantly used to develop teaching staff competence in junior specialists' educational standards including training seminars, discussion seminars (group discussions), brainstorm, polylogues, positional discussions, training games (exercise games), staging (business simulation), complex action games (case-study method), contest games, projects (alternatively called "project management"), training, case problem solution, criteria kaleidoscope, talk-show.

Conclusions: Workshops, trainings, case methods, round tables and other educational technologies help achieve practical results in developing teaching staff competence in junior specialist training standards.

Keywords: teaching *staff competence; junior specialists' educational standards; educational techniques.*

Introduction: Teaching staff activity in professional education standards is one of the priority vectors of domestic educational system modernization.

The importance of special pre-higher education is based on involvement students into social and cultural professional activity, development their personality-forming ideals, values, beliefs and attitudes helping young people find own position in the world (Yershova, 2015).

Professional training quality of prospective junior specialists mainly relies on teaching staff competence in professional training standards in colleges and technical schools.

Sources. The issue is based on a wide number of aspects and vectors including the ways of training efficient competence in teaching activity (researched by Kolominskyi Y., Lysenko A., Luzan P., Mazukha D., Romanova G., Yaroshenko O.,), psychological aspects of teaching competence development (researched by Ball G., Vynogradova M., Gasparyan V., Dorokhina V., Karamushka L., Maztomazyan M., Molyako V., Ravykovych S., Rudyk P. and other scientists).

It is important to point out that the research results offered by these scientists are insufficient to cover the issue of teaching staff competence in junior specialists' education standards.

The **aim** of this article is to determine the ways of implementing educational technologies to develop teaching staff competence in junior specialists' training standards.

Methods. A number of theoretical methods were used in this research including the analysis and the synthesis (to identify the current issue research level), summary (to make conclusions and recommendations).

Results and discussion. Special pre-higher education standards is expected to guarantee the unity of domestic learning environment, compatibility of basic educational plans, thus taking into consideration the personal abilities of all students. According to the Education Act adopted in Ukraine, one of the most essential conditions of modern quality education is to develop and implement a new generation of higher education standards comprising the rules of key competences of students, results of their learning, the whole education plan and other legally-approved components.

The implementation of competence approach is supported by educational methods and techniques helping students achieve estimated scientific results, enlisted in the educational standards (Luzan, 2018).

The aim of developing teaching staff competence in training standards of prospective junior specialists in colleges and technical schools is to implement motivational, cognitive, pragmatic and personal components studying the positive sides of educational concepts, ideas and technologies (Kalenskyi, 2019).

Teaching staff competence formation process in training standards of junior specialists in colleges and technical schools is supposed to be held both in basic educational establishments, training organizations, and to be closely connected with informal education.

Routine educational work is the key factor which favours teaching staff competence in training standards. Responsible approach to education plans, compatible with relevant teaching techniques helps motivate teachers to optimize their theoretical knowledge and practical skills.

Formation of teaching staff competence in junior specialists' training standards mainly relies on *favourable educational environment* in colleges and technical schools. This type of learning surrounding promotes self-development, helps teachers get familiar with best educational practices and advanced experience, latest know-hows and teaching techniques shared at pedagogical or psychological courses.

Formation of teachers' competences in colleges and technical schools is generally based on three involvement levels:

1. Research-to-practice conferences, educational seminars and councils, webinars.
2. Educational training, creative groups, advanced teaching experience and teaching art schools, seminars etc.
3. Self-education, research on individual educational issue(s) etc.

Teaching staff competence in junior specialists' standards is an integral personal feature which promotes self-discipline, boosts professional activity and helps achieve better performance.

Studying in appropriate educational organizations is expected to include extra training of teachers at seminars and courses with the purpose of optimization and sharing knowledge in junior specialists' training standards.

Informal education comprises lectures, roundtables, practical seminars, workshops and other forms of progressive special training aimed on raising teachers' readiness to professional activity in conditions of standards. Informal education is expected to include self-learning, studying regulatory documents, bibliography and e-resources such as topical portals, websites and net groups offering targeted aid to pedagogical employees enquiring information on education standards.

The methodical system of development of teaching staff competence in junior specialists' educational standards in colleges and technical schools mainly relies on learning methods including structural, logical, integration, play-based, dialogic and training techniques.

Learning performance motivation, modern learning environment, implementation of efficient learning methods, eventual self-control, achieving personal goals, active cognition interest, timeframes for learning and other factors prove this is a person-oriented learning technique.

Training workshops, self-learning development methods, contents-planning and academic progress assessment technologies are supposed to be implemented into learning schedule of educational institutions with the purpose of verifying the readiness of teaching staff to educational standards of junior specialists.

Training workshop as an educational technology makes it possible to use various methods and techniques in practice; as a model of gross activity it helps organize and conduct the entire learning process and create comfortable conditions for interaction and cooperation.

Discussion workshop (group discussion) is held as an opportunity for dialogical communication among students. This type of discussion is a possibility for teachers to introduce and share their ideas as far as education standards are concerned, defend their views, rationally reject wrong decisions and offer better solutions to challenges. Personal knowledge and experience gained in process of self-education are essential conditions of building meaningful dialogues. Discussion workshop may also include elements of brainstorm and management decision simulations.

Brainstorm (brainstorming) is an efficient way of idea production used for finding solutions to different challenges. This technology is targeted on common intellectual activity on finding alternative ways to solve problems.

Using brainstorm technology to develop the competence in standards helps:

- establish connections between theoretical knowledge and practical assignments
- activate cognitive education activity
- create perception of information
- train skills to focus attention and exert efforts on solving practical assignments
- rain skills of collective intellectual activity (Strelnikiov V., Britchenko I., 2013).

"Aquarium" is an efficient exercise helping activate critical thinking. Participants are divided into two groups: the first group is expected to discuss topics; the second one is expected to supervise the process. Both groups of participants may change roles.

This exercise makes it possible to come to final decisions with regard on other colleagues' views, to reconsider own ideas after obtaining new information. This strategy is most useful on the way of building efficient interaction and meaningful communication among all participants. This is a reliable tool of teaching participants how to conduct debates.

Problematic/reflexive polylogue unites three or more participants in discussion representing different points of view. This is a reliable method developing teacher's competence in junior specialists' training standards introduced by interviews, discussions, conferences, disputes, management games and other forms. In comparison with dialogue, polylogue is a more complicated tool of education, since it has to consider bigger number of factors including personal characteristics of the involved parties. It is mainly used in group studies and person-oriented learning technology.

Positional discussion is an important method developing teacher's competence in junior specialists' training standards. It includes active interaction of all parties into finding optimal solutions, helps teachers replenish the standards database and makes it possible to openly express own ideas and attitudes to the topics under discussion.

This type of discussion in action expects teachers to be divided into three groups developing solution projects to educational challenges of standards. The third group is supposed to complete the synthesis and find the solution(s).

Play-based technologies help determine own activity contents, set goals, plan the stages of cognitive activity, choose topics, control and assess own work. Thus, implementation of play-based technologies helps form adequate motivation to activity, master psychological cognition method, develop social and communicative skills, activate standards process, aim on creative work.

Activity of all participants is based on creative use of games helping gain the essential amount of knowledge, master habits and train skills.

– Training games which contain problematic issue with definite solution-finding algorithm

– Management games (business simulation) help work out communicative skills in process of role-play

– Complex action games (solutions to case games) which include impromptu elements in action

– Contest games. Contest as a tuition method offers a text with detailed assignment description, to be fulfilled by two or three small groups of participants, ended by comparison of results. The most optimal result is chosen as the solution

– Game projection is conducted as a first stage of business game (imitation model of business project or plan, built during the course of the first stage). The main difference from the business game method is representation of how to imitate or to replay the process of object's creation or optimization (Honcharov, 2005)

– Training process, introduced as a method of making favourable conditions for finding solutions to own psychological problems, forming professional and interpersonal communication competence

– Case task (situational challenge). Participants are expected not only to analyse the current challenge, but to find relevant solution (Honcharov, Kostiukova ta Hubnitska, 2007).

– Criteria kaleidoscope. Participants are given cards depicting different choice criteria based on the current topic. During the following discussion participants are expected to point out the most important criteria and put the cards accordingly on the demonstration board (the more important the criteria are, the closer to the centre the cards are placed). The results are presented afterwards.

– Talk-show. This role game, based on TV talk

shows helps participants to present scientific information, summarize the facts, make conclusions, establish self-control, promote self-esteem and reflexion.

So, the abovementioned techniques are based on synthetic-analytic activity and reflexive problem-solving followed by verbalization of intellectual processes (Bakhanov, 1999).

Implementation of competence-oriented junior specialists' training contents projection builds sufficient capacities for learning projection technology, play-based, coaching and case studies, and their practical usage in process of training junior specialists. It helps establish principles, find relevant approach to working out guidelines, possibly with IT-support throughout the entire course of junior specialists' training.

Workshops, coaching, case study method, roundtables and other educational technologies may help achieve estimated results in developing teaching staff competence in junior specialists' training standards.

Workshop technology is as active form of teacher's creative self-realization. It includes transferring experience by the means of both direct and commented demonstration of teaching techniques. A teacher is expected to be a professional mastering own creative pedagogical style and instructional tuition system.

During coaching sessions teachers are demonstrated different tests used as sample and algorithm to work out multilevel, valid and reliable students' academic progress assessment tests.

In order to guarantee instructionally correct realization of this educational technology, it is important to keep to the following (Sidorenko, 2002; Sysoyeva, 2011): permanent and stable groups, openness and readiness of all group members to interaction and communication, favourable psychological surrounding, keeping to the rules of teamwork and each period's structure, evaluation of coaching efficiency in terms of general conditions, psychic, creative and intellectual activity of its every participant.

The leading pedagogical experience points out the efficiency of case study technology in process of meeting targets set by development of teaching staff competence in junior specialists' training standards. This type of educational technology belong to the active tuition methods, its idea is to analyse situations, to discuss and to adopt decisions on certain professional issues (Goncharov, Kostyukova ta Gubnitska, 2007). Practical usage of case method helps built capacity of situational analysis, assess alternative decisions, pick up optimal solutions and realize its implementation.

Instructional and situational management games imitating professional creative pursuit are a reliable tool of developing skills of working out both educational and academic progress assessment technologies.

The main task of every teacher is to train students how to turn efforts into activity. This task is greatly favoured by the technology of collective intellectual activity (CIA).

CIA technology is supported by interaction of all participants, connected with common cognitive interest. Positive results of collective pursuit are determined by organizing skills, intellectual abilities and inner motivation of every participant (Artiushina, 2013).

SMART technologies are widely used to develop teaching staff competence in junior specialists' training standards. SMART technologies open access to electronic resources on professional education standards with their theoretical aspects and interactive knowledge testing. The main advantage of SMART technologies is progressive optimization and simple access to making educational contents and single data repository (Lypska, 2018).

Personal component of teaching staff competence in junior specialists' training standards in colleges and technical schools comprises progressive academic support, contents optimization, replenishment and renovation, careful planning own educational activity and creative pursuit. Personal component helps keep to timeframes and deadlines, survey, analyse and summarize own academic results, implement novelty teaching techniques, improve own teaching style and reflexion skills, generate new ideas, choose optimal teaching contents, alter traditional teaching schemes, exercise alternative approach to problem solutions.

This component can be developed by the means of coaching sessions, workshops, implementation of creative problem-solving methods (inversion, empathy, morphological analysis, brainstorm, kaleidoscope of associations), synectics, fantastic ideas analysis and synthesis, heuristic questions and other methods.

Workshop "Building teaching staff competence in training standards in colleges and technical schools", discussion workshop "Structure and contents of modern educational standards: new updates", brainstorm "Idea and contents of competence", polylogue "Higher education standards", positional discussion "The main idea of competence-based educational programs", training games "Academic progress assessment tests", staging games, complex action games, contest games "How to pick up relevant educational content building definite competence in prospective junior specialists?", play-based projection "Education technology", training "What prevents implementation of educational standards?" and other events were conducted during the course of the experimental research

titled "Methodical bases of junior specialists' training standards in colleges and technical schools".

Conclusions. The authors of this article have found out that the development of teaching staff competence in junior specialists' training standards is supposed to be held both in basic educational establishments, training organizations, and to be closely connected with informal education.

A number of teaching techniques including workshops, trainings, case method, roundtables and other technologies may be helpful in development teaching staff competence in junior specialists' training standards.

The perspectives of further research in this area are supposed to be based on substantiation of recommendations of usage definite educational technologies developing teaching staff competence in junior specialists' training standards.

List of references

Артюшина, М.В., 2013. Використання технології колективної розумової діяльності у процесі навчання студентів економічного профілю. *Науковий часопис Національного педагогічного університету ім. М. П. Драгоманова. Серія 16. Творча особистість учителя: проблеми теорії і практики,* 19 (29), с. 101-105.

Баханов, К. А., 1999. Що ж таке технологія навчання? *Шлях освіти*, 3, 24 с.

Гончаров, С. М., 2005. *Науково-методичне забезпечення кредитно-модульної системи організації навчального процесу:* монографія. Рівне: НУВГП.

Єршова, Л., 2015. Формування референтної особистості як проблема освітньої практики сучасної України. *Вісник Черкаського національного університету. Педагогічні науки,* 6 (339), с. 119-124.

Гончаров, С. М., Костюкова, Т. А. та Губницька, О. М., 2007. *Креативні методи навчання в кредитно-модульній системі організації навчального процесу:* навч.-метод. посіб. Рівне: НУВГП.

Каленський, А. А., Лузан, П. Г., Ваніна, Н. В. та Пащенко Т. М., 2018. *Стандартизація професійної освіти: теорія і практика;* монографія. Житомир: «Полісся».

Липська, Л.В., 2018. Роль SMART-технологій у навчальному процесі професійних навчальних закладів. В: *Адаптивні технології управління навчанням: матеріали четвертої міжнар. конф.* Одеса, Україна, 24-26 Жовтень 2018, с. 15-19.

Лузан, П.Г., Пащенко, Т.М., Ваніна, Н.М. та Колісник, Н.В., 2018. Стандартизація професійної освіти на основі компетентнісного підходу *Science Rise*, 5 (25), с. 32-35.

Сидоренко, Е.В., 2002. Тренинг коммуникативной компетентности в деловом взаимодействии. СПб.: Речь.

Сисоєва, С.О., 2011. *Інтерактивні технології навчання дорослих:* навчально-методичний посібник. НАПН України, Ін-т педагогічної освіти і освіти дорослих. Київ: ВД «ЕКМО».

Стрельніков, В. Ю. та Брітченко, І. Г., 2013. *Сучасні технології навчання у вищій школі:* модульний посібник для слухачів авторських курсів підвищення кваліфікації викладачів МІПК ПУЕТ, Полтава: ПУЕТ.

Translated & Transliterated

Artyushyna, M.V., 2013. Vykorystannia tekhnolohii kolektyvnoi rozumovoi diialnosti u protsesi navchannia studentiv ekonomichnoho profiliu [Use of technology of collective mental activity in the process of education of students of economic profile]. *Naukovyi chasopys Natsionalnoho pedahohichnoho universytetu im. M. P. Drahomanova. Seriia 16. Tvorcha osobystist uchytelia: problemy teorii i praktyky [Scientific journal of the National Pedagogical University. MP Dragomanov. Series 16. The creative personality of the teacher: problems of theory and practice],* 19 (29), s. 101-105, [in Ukrainian].

Bakhanov, K. A., 1999. Shcho zh take tekhnolohiia navchannia? [What is learning technology?] *Shliakh osvity [The path of education]*, 3, 24 s, [in Ukrainian].

Honcharov, S. M., 2005. *Naukovo-metodychne zabezpechennia kredytno-modulnoi systemy orhanizatsii navchalnoho protsesu: monohrafiia [Scientific and methodological support of the credit-module system of organization of the educational process: monograph]*. Rivne: NUVHP, [in Ukrainian].

Yershova, L., 2015. Formuvannia referentnoi osobystosti yak problema osvitnoi praktyky suchasnoi Ukrainy [Forming a reference person as a problem of educational practice in the modern Ukraine]. *Visnyk Cherkaskoho natsionalnoho universytetu. Pedahohichni nauky [The Journal of Cherkasy National University. Pedagogy]*, 6 (339), s. 119-124, [in Ukrainian].

Honcharov, S. M., Kostiukova, T. A. ta Hubnytska, O. M., 2007. *Kreatyvni metody navchannia v kredytno-modulnii systemi orhanizatsii navchalnoho protsessu [Creative methods of training in the credit-modular system of organization of educational process]:* navch.-metod. posib. Rivne: NUVHP, [in Ukrainian].

Kalenskyi, A. A., Luzan, P. H., Vanina, N. V ta Pashchenko T. M., 2018. *Standartyzatsiia profesiinoi osvity: teoriia i praktyka: monohrafiia [Standards of Vocational Education: Theory and Practice: monograh]*. Zhytomyr: «Polissia», [in Ukrainian].

Lypska, L.V., 2018. Rol SMART-tekhnolohii u navchalnomu protsesi profesiinykh navchalnykh zakladiv [The role of SMART-technologies in the educational process of professional educational institutions]. V: *Adaptyvni tekhnolohii upravlinnia navchanniam: [Adaptive learning management technologies]* materialy chetvertoi mizh nar. konf. Odesa, Ukraina, 24-26 Zhovten 2018, s. 15-19, [in Ukrainian].

Luzan, P.H., Pashchenko, T.M., Vanina, N.M. ta Kolisnyk, N.V., 2018. Standartyzatsiia profesiinoi osvity na osnovi kompetentnisnoho pidkhodu [Standards of a professional education according to a competency principle]. *Science Rise,* 5 (25), s. 32-35, [in Ukrainian].

Sydorenko, E.V., 2002. Trenynh kommunykatyvnoi kompetentnosty v delovom vzaymodeistvyy [Training of communicative competence in business interaction], SPb: Rech [in Russian].

Sysoieva, S.O., 2011. *Interaktyvni tekhnolohii navchannia doroslykh [Interactive technologies for adult learning]:* navchalno-metodychnyi posibnyk. NAPN Ukrainy, In-t pedahohichnoi osvity i osvity doroslykh. Kyiv: VD «EKMO» [in Ukrainian].

Strelnikov, V. Yu. ta Britchenko, I. H., 2013. *Suchasni tekhnolohii navchannia u vyshchii shkoli [Modern technologies of education in high school]:* modulnyi posibnyk dlia slukhachiv avtorskykh kursiv pidvyshchennia kvalifikatsii vykladachiv MIPK PUET, Poltava: PUET [in Ukrainian].

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Технології розвитку готовності педагогічних працівників до стандартизації підготовки молодших спеціалістів

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Реферат.

Актуальність: якість професійної підготовки майбутніх молодших спеціалістів значною мірою визначається готовністю педагогічних працівників до стандартизації фахової освіти молодших спеціалістів у коледжах і технікумах.

Мета: з'ясувати особливості застосування педагогічних технологій для розвитку готовності педагогічних працівників до стандартизації підготовки молодших спеціалістів.

Методи: аналіз і синтез – з метою з'ясування стану та рівня розробленості досліджуваної проблеми; узагальнення – для формулювання висновків і рекомендацій щодо застосування технологій розвитку готовності викладачів до стандартизації підготовки молодших спеціалістів.

Результати. Основою реалізації методичної системи розвитку готовності педагогічних працівників до стандартизації підготовки молодших спеціалістів у коледжах і технікумах є застосування педагогічних технологій чи методик, серед яких виділяють: структурно-логічні, інтеграційні, ігрові, діалогові, тренінгові. Коротко охарактеризовані педагогічні технології, які доцільно застосовувати для розвитку готовності педагогічних працівників до стандартизації підготовки молодших спеціалістів: семінар-тренінг, семінар-дискусія (групова дискусія), мозковий штурм (мозкова атака, брейнстормінг), полілог, позиційна дискусія, ігри тренувального характеру (ігри-вправи), ігри-інсценівки (бізнес-симуляція), комплексні дієві ігри (розв'язання кейс-стаді), ігри-змагання, ігрове проектування (інша назва ? управління проектами), тренінг, ситуація-проблема (ситуаційна задача), критеріальний калейдоскоп, ток-шоу.

Висновки: досягти реальних результатів розвитку готовності педагогічних працівників до стандартизації підготовки молодших спеціалістів допоможуть технології майстер-клас, тренінги, кейс-метод, «круглі столи» та інші технології навчання.

Ключові слова: *готовність педагогічних працівників, стандартизація підготовки молодших спеціалістів, педагогічні технології.*

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A TECHNOLOGY FOR DEVELOPING PROFESSIONAL COMPETENCÅ OF VOCATIONAL TRAINING TEACHERS

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Abstract.

The relevance of constant professional development for teaching staff in professional (vocational) education schools (P(V)E schools) is conditional upon the innovative changes in education, the modernization of educational and industrial technologies and the elaboration of effective models and mechanisms of training highly qualified personnel. The professional development of masters of vocational training is correlated with the development of their professional competency, integrating the so-called systematic build-up of new knowledge and experience.

The article aims to justify a particular technology for developing professional competency in masters of vocational training from P(V)E schools.

Methods include a theoretical analysis of scientific works, a study of practical experience, systematization, generalization and a pedagogical experiment.

Results. The results of the survey of teaching staff (including masters of vocational training) regarding the final level of professional motives confirm the following: a high level – 29%, a sufficient level – 56%, an average level – 15%. The results of these specialists' self-assessment of their readiness for professional development are as follows: a high level – 48%, a sufficient level – 47%, an average level – 5%. The paper proves that there appears to be a need to discover some optimal technologies for developing professional competency in masters of vocational training, given the conditions for elaborating modern models of teacher education. An algorithm for designing the technology for developing professional competency in masters of vocational training from P(V)E schools includes a scientific aspect (defining and adhering to targets, objectives, methodological and other principles of professional education), a procedural aspect (modelling the content, forms and methods for developing professional competency) and a result-oriented aspect (identifying the level of professional competency in masters of vocational training based on appropriate methods and self-analysis).

Conclusions. The paper presents the technology for developing professional competency in masters of vocational training from P(V)E schools as a psycho-pedagogical process organized according to an appropriate algorithm, whose implementation should result in the professional development of masters of vocational training.

Keywords: *professional development, professional competency, master of vocational training, technology for developing professional competency in masters of vocational training.*

Introduction. Modern reforms in the national education, including professional (vocational) education (P(V)E), are accompanied by innovative changes aimed at the modernization, a systematic introduction of modern educational and industrial technologies into the educational process and the creation of effective models and mechanisms for training highly qualified personnel. Given this, it becomes essential to develop professional competency in modern teachers and masters of vocational training, who should able to solve significant educational problems. The Law of Ukraine "On Education" (Art. 54, Clause 2, 2017)

states that teaching staff must continuously improve their professional and general cultural level and pedagogical skills. The National Strategy for the Development of Education in Ukraine until 2021 (2013) refers to training a new generation of teaching staff, raising the level of education, pedagogical skills, the professional culture of teaching staff (Legislation of Ukraine, 2013). The Concept of Teacher Education Development (2018) envisages an improvement in the system of teacher education to establish a training base for teaching staff of a new generation, create conditions for involving the best practitioners of other professions in educational activities and ensure the establishment and development of modern alternative models on constant professional and personal development, which will become a critical condition for implementing the state policy into reforms in all divisions of education (Legislation of Ukraine, 2019). The analysis of legislative acts proves the relevance of professional growth for masters of vocational training. After all, it involves the development of their professional competency for solving not only educational tasks. It is also essential for the development of the country's economy and the personal growth of various specialists.

Materials. Such scholars as A. Hurzhii, V. Kremen, L. Lukianova, N. Nychkalo, V. Radkevych and O. Shcherbak theorize about the conceptual views on the development of the personality of teachers or masters of vocational training in the system of continuing professional education. They think that "continuing education is a process of personal, social and professional development of the individual throughout his or her life, which aims to improve the quality of life of both the individual and society" (Lukianova, 2017, pp. 4). There has been much speculation about the issues of training masters of vocational training and developing their professional competency (Yu. Belikova, T. Gerliand; L. Komisarova, H. Omelchenko, Z. Turianytsia, O. Yurtaieva et al.). They believe that there are different ways to solve the issue of adjusting the professional competency of masters of vocational training to modern needs of the national professional education. In this context, one should pay specific attention to developing cultural attitudes in masters of vocational training especially regarding professional and pedagogical culture, as well as the culture of personal and professional development, shaped while studying in P(V)E schools and under the influence of external factors, including the trends in the labour market. Such researchers as M. Artiushyna, S. Kravets, P. Luzan and H. Romanov study theoretical principles for building the content of education and introducing innovative educational technologies The concept of educational technology is understood as a system of the educational process and specially organized educational activities aimed at the development, education, learning and character building of the individual.

Thus, current conditions for reforms in the P(V)E system substantiate the importance of constant professional development of teaching staff. It causes the search for some optimal ways to develop professional competency in masters of vocational training in the context of using and improving the existing effective educational technologies and justifying new and multifunctional methods corresponding to the content of modern models of teacher education.

The article aims to justify an algorithm for designing the technology for developing professional competency in masters of vocational training from P(V)E schools.

Methods include the following: a theoretical analysis of psycho-pedagogical literature, scientific works, dissertations in the field of pedagogy, a study of practical experience – to describe the characteristics of professional development of masters of vocational training; a pedagogical experiment (the ascertaining stage) – to identify the existing level of professional competency in masters of vocational training; analysis, synthesis, generalization – to specify the technology for developing professional competency in masters of vocational training.

Results and discussion. In the context of economics and sociology, professional development correlates with the development of performance potential or staff development through searching for the ways to improve the activities of educational institutions and increase the value of teaching staff. From the standpoint of psychology, professional development involves psychological changes related to changes in the mind and behaviour of the individual, the emergence of new motives and interests, the acquisition of new mental capacities. In pedagogy, professional development of the individual occurs when solving professionally important tasks (cognitive, communicative and moral). At this particular time, teachers acquire a basic set of necessary business skills and moral qualities related to their profession. The analysis of professional self-development of masters of vocational training involves comparing the results of educational activities with those criteria, envisaged by the requirements of education policy, economic development and personal aspirations for self-realization. The Concept of Implementation of the State Policy in the Field of Professional (Vocational) Education "Modern Professional (Vocational) Education" until 2027 highlights the importance of motivation towards cultivating professional development of teaching staff by involving highly qualified experts in production

and the service sector in the educational process (Legislation of Ukraine, 2019). Indeed, the active professional development of masters of vocational training encompasses conscious personal needs and their professional motives in professional growth and lifelong learning. The results of the survey of employees from P(V)E schools prove the sufficient level of their motivation towards professional development. Fifty-six per cent out of 36 respondents feel sufficiently motivated towards professional development. The remaining 29% and 15%, respectively, are at high and average levels of motivation towards professional development.

A self-analysis of the professional development of masters of vocational training needs to answer the following questions: "Can I develop the personality of the pupils, make them more responsible for their professional future and development?"; "Can I engage in creative activities in P(V)E schools of different types?"; "Can I work in a new environment, adapt to changes and respond to modern and promising processes of social and economic development of society promptly?". Answering these and other questions, every master of vocational training is reconsidering his or her role in professional activities and is searching some ways to improve his or her professional skills, professional competency and enrich his or her culture (Kravets, 2019, pp. 317). In 2019, the employees of the Laboratory of Distant Professional Training at the Institute of VET of the NAES of Ukraine, within the framework of working on the professional standard for the profession "Master of Vocational Training", surveyed the masters of vocational training from Ukrainian P(V)E schools about the importance of employment functions and their readiness for their performance. Consequently, the masters of vocational training from 18 Ukranian Oblasts completed e-questionnaires on self-assessment of their readiness for professional development, which correlates with the development of professional competency. The analysis of these e-questionnaires shows the following results: 48% out of 1056 respondents think they are at a high level of readiness for professional development. The remaining 47% and 5% are at sufficient and average levels. It must be acknowledged that nobody indicated a low level of such readiness.

In the context of designing a new model of professional education, teaching staff are the primary agents of change, as well as active participants in its development and approval. Given this, educational activities of masters of vocational training in P(V)E schools exceed the implementation of syllabi for relevant subjects and become multifunctional. It refers to an active participation of masters of vocational training in the implementation of strategic objectives of the educational sector; the ability to design the content of training for future skilled workers; the provision of inter-branch communication; the management of educational projects; the elaboration of integrated models for professional training which combine traditional methods and modern educational technologies (Radkevych, Luzan and Kravets, 2017, pp. 265). Therefore, the development levels of professional competency reflect the professional-pedagogical development of masters of vocational training. However, professional competency is not a permanent category. It implies the so-called systematic build-up of new knowledge and experience through self-study, formal and non-formal education, internships, lifelong learning through higher education (master's and doctoral degrees), certification within the framework of participation in Ukrainian and international projects; cooperation and interaction between pupils, parents, teaching staff, school leaders, management structures in education, employers, higher education institutions, academic institutions and other public organizations. Given this, every master of vocational training should be aware of his or her mission in these constructive changes. Besides, a systematic boost of his or her readiness to implement educational and industrial innovations will transform the demands of the labour market during vocational training of future skilled workers through expanding professional skills and abilities of masters of vocational training. It necessitates an active search for different forms, methods and technologies to develop professional competency following the needs of masters of vocational training, pupils, educational institutions, cultural characteristics and economic problems.

The analysis of scientific works and encyclopedias shows that it is necessary to follow a specific algorithm for achieving expected results to solve relevant tasks in the field and increase the productivity of workers. The concept of technology integrates the set of goals, content and information about the sequence of individual operations in the production process, methods and means of achieving expected results. In the education system, this concept is implemented at the level of solving strategic tasks for the education system (educational technology). It also reflects the tactics of implementing educational technologies in the educational process under certain conditions (pedagogical technology) and models the way of developing specific educational material (concept) within the relevant academic subject, topic, issue (teaching technology) (Sorokvashyn, 2018, pp. 99). In the context of the educational process, the mission of masters of vocational training implies implementing technologies at all levels. However, it is vital to justify the appropriate technology, whose essence, purpose and content correlate with the innovative trends in professional education, to improve their educational activities and enhance their professional competency.

The technology for developing professional competency in masters of vocational training is inextricably linked with educational activities. Also, it incorporates the principles of systematic, cultural, humanistic, competency-based, subject-oriented, personality-oriented, developmental and prognostic approaches, continuation principles and combines theory, productive activity and lifelong learning. It refers to the *scientific aspect* of the technology, with defining its purpose and objectives.

Therefore, this technology aims to develop professional competency in masters of vocational training through using a personal potential, resources of the educational environment and opportunities for social partnership for constant professional development, self-improvement and productivity in the field of professional education. The objectives of this technology are as follows: to boost motivation of masters of vocational training towards self-development; to create relevant conditions for developing professional competency in masters of vocational training; to discover the practical ways, forms, methods and tools for it; to ensure constant professional development of masters of vocational training so that they can engage in educational (intellectual, creative) activities, "aimed at education and development of the individual, his or her cultural, civic and / or professional competencies" (Legislation of Ukraine, 2017).

The procedural aspect of this technology implies a specific algorithm for its implementation in the educational environment, production and the service sector. This stage involves the mobilization of all personal, instrumental and methodological tools for developing professional competency in masters of vocational training. Given the innovative progress of production, technological changes and growing demands of the labour market, the technology for developing professional competency in masters of vocational training should integrate the psycho-pedagogical aspect of interaction between teaching staff and pupils while implementing a standardized content of professional training, exceed the educational environment, employ resources of a public-private partnership and capacities of dual education to study the current trends in production and the service sector. Besides, this technology should be advanced, open to rethinking and adjust to the new requirements and priority areas in the country's development (Kravets et al., pp. 11).

The results of the survey of employers regarding the possibilities and frequency of using specific forms for enhancing professional skills of employees indicate that the most common ones are advanced training (in-service training (87%), internships in production (57%); retraining (in educational institutions (79%), in production (65%) (The Institute of Professional Qualifications, 2019).

The development of professional competency in masters of vocational training cannot be limited by advanced training scheduled in advance. In the context of the introverted (closed) pedagogical system, it should be an active process and involve studying some positive practices of teaching staff (mentors); participating in the work of methodological commissions, mentoring schools, novice masters of vocational training; exchanging experience, mutual visits and assistance; holding methodological seminars, workshops, scientific and practical events. The potential of the extroverted (open) pedagogical system focuses on the complex integration of the educational process with organizational and technological processes in production under the established social partnership between educational institutions and enterprises. Besides, it serves as an essential resource for developing professional competency in masters of vocational training. It refers to "removing" the technology for developing professional competency in masters of vocational training from the introverted (closed) pedagogical system and expanding forms of professional development by using resources of the extroverted (open) pedagogical system. The technology for developing professional competency in masters of vocational training combines optimal resources of introverted and extraverted pedagogical systems for gaining formal and non-formal experience and constant professional development of both teaching staff and pupils.

The result-oriented aspect of this technology involves identifying the final level of professional competency in masters of vocational training and conducting self-analysis on a reflexive basis. Reflective processes regarding well-developed or underdeveloped professional competency rely on the ability of masters of vocational training to regulate professional activities and realize the goals, objectives and functions of the educational process. At the same time, one rethinks his or her experience, professional successes or failures and manages individual psychological processes to continue professional development.

Conclusions. Therefore, the technology for developing professional competency in masters of vocational training from P(V)E schools is an organized psycho-pedagogical process incorporating scientific approaches and principles. One can implement it based on innovative forms, methods, means of training and self-study. This technology guarantees the professional development of masters of vocational training. The algorithm for designing this technology includes scientific, procedural and result-oriented stages. They involve defining and adhering to the targets, objectives, methodological and other principles of professional education; modelling the content, forms and methods for developing profes-

sional competency in masters of vocational training; identifying the level of professional competency in masters of vocational training based on self-analysis and methods adapted in pedagogy and psychology. The content of this technology should be advanced, open to rethinking and adjust to the new requirements and priority areas in the country's development, including the integration of the national education into European educational space.

List of referenses

Герлянд, Т. 2011. Структурно-змістові аспекти професійної компетентності майбутніх кваліфікованих робітників. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка,* 2, с. 30-34.

Законодавство України (Верховна Рада України), 2013. *Про Національну стратегію розвитку освіти в Україні на період до 2021 року: Указ Президента України від 25.06.2013 № 344/2013.* [online] (Останнє оновлення 04 Липень 2013) Доступно: <https://zakon3.rada.gov.ua/laws/show/344/2013> [Дата звернення 10 Вересень 2019].

Законодавство України (Верховна Рада України), 2017. *Про освіту: Закон України від 05.09.2017 № 2145-VIII.* [online] (Останнє оновлення 09 Серпень 2019) Доступно: <http://zakon2.rada.gov.ua/laws/show/2145-19/page/> [Дата звернення 10 Вересень 2019].

Законодавство України (Верховна Рада України), 2019. *Про схвалення Концепції реалізації державної політики у сфері професійної (професійно-технічної) освіти «Сучасна професійна (професійно-технічна) освіта» на період до 2027 року: Розпорядження Кабінету Міністрів України від 12.06.2019 № 419-р.* [online] (Останнє оновлення 12 Червень 2019) Доступно: <https://zakon.rada.gov.ua/laws/show/419-2019-%D1%80> [Дата звернення 10 Вересень 2019].

Інститут професійних кваліфікацій, 2019. *Аналіз потреб ринку праці, викликів та можливостей на території Східної України: Попередній звіт.* [online] Доступно : <http://ipq.org.ua/upload/files/files/03_Novyny/2019.05.15_Zvit/IPQ_Report_09.05.19.pdf> [Дата звернення 10 Вересень 2019].

Кравець, С. Г., 2019. Професійний розвиток сучасного педагога в контексті реформування професійної освіти. В: *Розвиток професійної майстерності педагога в умовах нової соціокультурної реальності: ІІ Міжнародна наук.-практ. конф.,* Ч. 1. Тернопіль, Україна, 11-12 Квітень. 2019. Тернопіль: Тайп.

Кравець, С. Г., Кравець, Ю. І., Дерев'янко, Н. П. та Оліферчук, О. Г., 2014. *Педагогічні основи формування змісту підготовки кваліфікованих робітників за інтегрованими професіями: посібник.* Київ: Поліграфсервіс.

Лук'янова, Л., 2017. *Законодавче забезпечення освіти дорослих: зарубіжний досвід.* Київ: ДКС-Центр.

Міністерство освіти України, 2018. *Про затвердження Концепції розвитку педагогічної освіти: Наказ МОН України від 16.07.2018 №776.* [online] (Останнє оновлення 16 Липень 2018) Доступно: <https://mon.gov.ua/ua/npa/pro-zatverdzhennya-koncepciyi-rozvitku-pedagogichnoyi-osviti> [Дата звернення 10 Вересень 2019].

Радкевич, В. О., Лузан, П. Г. та Кравець, С. Г., 2017. Стандартизація професійної освіти в контексті євроінтеграційних процесів. В: *Наукове забезпечення розвитку освіти в Україні: актуальні проблеми теорії і практики (до 25-річчя НАПН України).* Київ: Видавничий дім «Сам», с. 259-267.

Сороквашин, С. В., 2018. *Формування інформаційно-комунікаційної компетентності майбутніх кваліфікованих робітників будівельної галузі у процесі професійної підготовки.* Кандидат наук. ВНЗ «Університет імені Альфреда Нобеля».

Bazyl, L. O., Shatkovska, H. I., Klymenko, M. M., and Radkevych, V. O., 2019. Psychological and pedagogical features of the career growth of vocational education's teachers. *Opcion*, 35 (Special Issue 23), pp. 763-779.

Translated & Transliterated

Herliand, T., 2011. Strukturno-zmistovi aspekty profesiinoi kompetentnosti maibutnikh kvalifikovanykh robitnykiv [Structural and substantive aspects of professional competence of future qualified workers]. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPN Ukrainy. Profesiina pedahohika [Scientific herald of the Institute of vocational education and training of NAES Ukraine. Professional Pedagogy],* 2, s. 30-34, [in Ukrainian].

Zakonodavstvo Ukrainy (Verkhovna Rada Ukrainy) [Legislation of Ukraine (Verkhovna Rada of Ukraine)], 2013. *Pro Natsionalnu stratehiiu rozvytku osvity v Ukraini na period do 2021 roku: Ukaz Prezydenta Ukrainy vid 25.06.2013 № 344/2013 [On the National Strategy of Education Development in Ukraine until 2021: the Decree of the President as of June 25, 2013 No 344/2013].* [online] Dostupno: https://zakon3.rada.gov.ua/laws/show/344/2013 [Data zvernennia 10 Veresen 2019], [in Ukrainian].

Zakonodavstvo Ukrainy (Verkhovna Rada Ukrainy) [Legislation of Ukraine (Verkhovna Rada of Ukraine)], 2017. *Pro osvitu: Zakon Ukrainy vid 05.09.2017 № 2145-VIII [On Education: the Law of Ukraine as of September 5, 2017 No 2145-VIII]* [online]. Dostupno: http://zakon2.rada.gov.ua/laws/show/2145-19/page/ [Data zvernennia 10 Veresen 2019], [in Ukrainian].

Zakonodavstvo Ukrainy (Verkhovna Rada Ukrainy) [Legislation of Ukraine (Verkhovna Rada of Ukraine)], 2019. *Pro skhvalennia Kontseptsii realizatsii derzhavnoi polityky u sferi profesiinoi (profesiino-tekhnichnoi) osvity «Suchasna profesiina (profesiino-tekhnichna) osvita» na period do 2027 roku: Rozporiadzhennia Kabinetu Ministriv Ukrainy vid 12.06.2019 № 419-r. [On the Approval of the Concept of Implementation of State Policy in the Field of Professional (Vocational) Education «Modern Professional (Vocational) Education» until 2027: the Decree of the Cabinet of Ministers of Ukraine as of June 12, 2019 No 419-r].* [online] Dostupno: https://zakon.rada.gov.ua/laws/show/419-2019-%D1%80 [Data zvernennia 10 Veresen 2019], [in Ukrainian].

Instytut profesiinykh kvalifikatsii [The Institute of Professional Qualifications], 2019. *Analiz potreb rynku pratsi, vyklykiv ta mozhlyvostei na terytorii Skhidnoi Ukrainy: Poperednii zvit [Analyzing the Needs of the Labour Market, Challenges and Prospects in Eastern Ukraine: the Preliminary Report].* [online] Dostupno: <http://ipq.org.ua/upload/files/files/03_Novyny/2019.05.15_Zvit/IPQ_Report_09.05.19.pdf> [Data zvernennia 10 Veresen 2019], [in Ukrainian].

Kravets, S. H., 2019. Profesiinyi rozvytok suchasnoho pedahoha v konteksti reformuvannia profesiinoi osvity [The Professional Development of a Modern Teacher in the Context of Reforms in Professional Education]. V: *Rozvytok profesiinoi maisternosti pedahoha v umovakh novoi sotsiokulturnoi realnosti: II Mizhnarodna nauk.-prakt. konf. [Developing Professional Skills in Teachers under the New Sociocultural Conditions: the 2nd International Scientific and Practical Conference],* Ch. 1. Ternopil, Ukraina, 11-12 Kviten. 2019. Ternopil: Taip, [in Ukrainian].

Kravets, S. H., Kravets, Yu. I., Derevianko, N. P. ta Oliferchuk, O. H., 2014. *Pedahohichni osnovy formuvannia zmistu pidhotovky kvalifikovanykh robitnykiv za intehrovanymy profesiiamy: posibnyk [The Pedagogical Principles of Building the Content of Training of Skilled Workers for Integrated Professions: a Textbook]*. Kyiv: Polihrafservis, [in Ukrainian].

Lukianova, L., 2017. *Zakonodavche zabezpechennia osvity doroslykh: zarubizhnyi dosvid [The Legal Framework of Adult Education: the International Experience]*. Kyiv: DKS-Tsentr, [in Ukrainian].

Ministerstvo osvity Ukrainy, 2018. *Pro zatverdzhennia Kontseptsii rozvytku pedahohichnoi osvity: Nakaz MON Ukrainy vid 16.07.2018 №776 [On the Approval of the Concept of Teacher Education Development: the Order of the Ministry of Education and Science of Ukraine as of July 16, 2018 No 776]*. [online] Dostupno: https://mon.gov.ua/ua/npa/pro-zatverdzhennya-koncepciyi-rozvitku-pedagogichnoyi-osviti. [Data zvernennia 10 Veresen 2019], [in Ukrainian].

Radkevych, V. O., Luzan, P. H. ta Kravets, S. H., 2017. Standartyzatsiia profesiinoi osvity v konteksti yevrointehratsiinykh protsesiv [Standardization of Professional Education in the Context of European Integration]. V: *Naukove zabezpechennia rozvytku osvity v Ukraini: aktualni problemy teorii i praktyky (do 25-richchia NAPN Ukrainy) [The Scientific Support of Education Development in Ukraine: Some Relevant Problems of Theory and Practice]*. Kyiv: Vydavnychyi dim «Sam», s. 259-267, [in Ukrainian].

Sorokvashyn, S. V., 2018. *Formuvannia informatsiino-komunikatsiinoi kompetentnosti maibutnikh kvalifikovanykh robitnykiv budivelnoi haluzi u protsesi profesiinoi pidhotovky [Developing Informational and Communicative Competency in Future Skilled Workers of the Building Industry during Professional Training]*. Kandydat nauk. VNZ «Universytet imeni Alfreda Nobelia», [in Ukrainian].

Bazyl, L. O., Shatkovska, H. I., Klymenko, M. M., and Radkevych, V. O., 2019. Psychological and pedagogical features of the career growth of vocational education's teachers. *Opcion*, 35 (Special Issue 23), 763-779, [in English].

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Технологія розвитку професійної компетентності майстрів виробничого навчання

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Реферат.

Актуальність безперервного професійного розвитку сучасних педагогічних працівників ЗП(ПТ)О зумовлюється інноваційними змінами в освітній галузі, модернізацією педагогічних та виробничих технологій, створенням ефективних моделей і механізмів підготовки висококваліфікованих кадрів. Професійний розвиток сучасного майстра виробничого навчання співвідноситься з розвитком його професійної компетентності, інтегруючи системне "нарощування" нових знань і досвіду.

Мета: обґрунтувати технологію розвитку професійної компетентності майстра виробничого навчання у ЗП(ПТ)О.

Методи: теоретичний аналіз наукових праць, вивчення практичного досвіду, систематизація й узагальнення, педагогічний експеримент.

Результати. Результати опитування педагогічних працівників (у т.ч. і майстрів виробничого навчання) щодо сформованості професійних мотивів засвідчують: високий рівень – 29%, достатній – 56%, середній – 15%; за підсумками самооцінювання майстрами виробничого навчання готовності до реалізації функції "професійний розвиток": високий рівень – 48%, достатній – 47%, середній -5%. З'ясовано, що в умовах створення сучасних моделей педагогічної освіти виникає необхідність пошуку оптимальних технологій розвитку професійної компетентності майстрів виробничого навчання. Алгоритм проектування технології розвитку професійної компетентності майстрів виробничого навчання ЗП(ПТ)О включає: науковий (визначення та дотримання цільових орієнтирів, завдань, методологічних засад, принципів професійної освіти), процесуальний (моделювання змісту, форм та методів розвитку професійної компетентності) та результативний (проведення діагностики рівня сформованості професійної компетентності майстрів виробничого навчання на основі відповідних методик та самоаналізу) аспекти.

Висновки: технологію розвитку професійної компетентності майстрів виробничого навчання ЗП(ПТ)О представлено як організований за відповідним алгоритмом психолого-педагогічний процес, реалізація якого гарантує досягнення результату – професійного розвитку особистості майстра виробничого навчання.

Ключові слова: професійний розвиток, професійна компетентність, майстер виробничого навчання, технологія розвитку професійної компетентності майстрів виробничого навчання.

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CONTINUING PROFESSIONAL TRAINING OF PHARMACEUTICAL INDUSTRY PERSONNEL USING REMOTE TECHNOLOGIES

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Abstract.

Relevance: the need for the development and experimental verification of lifelong learning, namely: microbiology, virology and immunology of future Masters of pharmacy (during studying in higher educational institution and after its graduation, their professional career in the context of society informatization).

Aim: to analyze the state of preparation of Masters of pharmacy in the study of microbiology, virology and immunology in the conditions of society informatization.

Methods: theoretical (analysis, synthesis, generalization); empirical (expert evaluation and self-assessment methods; questionnaire).

Results: the modernization update of the purpose and contents of teaching the future Masters of pharmacy in microbiology, virology and immunology is proposed. An attempt has been made to introduce such a system of training, which would be aimed at the formation of professional knowledge of future Masters of pharmacy, continuous improvement of their professional competences, meaningful practical application of the obtained theoretical knowledge and the acquisition of new knowledge (that appears in the scientific space), the formation of appropriate skills, effective communication formation in the professional pharmaceutical environment through remote technologies.

Conclusions: the author has proved that the profession of provisor is inherently a process of constant self-development and self-improvement, with the help of which pharmaceutical activity will be effective. Considering that the pharmaceutical industry has undergone significant changes in comparison with the last century, and requires continuous scientific and educational education, it is concluded that the modern provisor should be able to improve his personal professional qualification at the convenient time for him, remotely, including by online and offline.

Keywords: *distance learning, educational institution, information technologies, Master's degree, training, educational process, preparation, provisor, pharmacist.*

Introduction. The accession of our country to the European community, the informatization of society, the development of technologies in various fields, in particular, pharmaceutical one, give impetus to the implementation of integration processes in education (Vlasenko, 2017, pp. 12-14). An important component of Ukraine's education system is higher pharmaceutical education, the nature of which is aimed at building the competencies of health care professionals, the level of which should be equivalent to trends in society. In recent years, there has been a need to review and update the training system for these specialists. After all, maintaining public health is the key to the well-being and prosperity of both the state and society as a whole.

The good health of the nation not only increases the life expectancy and quality of life, but also improves the efficiency and working capacity of the population as a result of improving the economic and material situation of the population and the country as a whole. Health and safety issues have always been at the forefront of social and economic and cultural life in our

country every citizen and the relevant health care system, including pharmaceutical specialists, should be concerned about the state of health.

An analytical review of the specific training of pharmaceutical industry professionals identified a number of related problems that need to be addressed:

– substantiation of theoretical and practical principles of pharmaceutical education management in the conditions of dynamic development of social and economic changes;

– providing the pharmaceutical industry specialists with qualitatively new scientific knowledge in accordance with requirements that are constantly changing and forming into a dynamic system;

– defining directions of innovative changes in the development of pharmaceutical education;

– finding and developing a model that incorporates a variety of training forms and methods.

Sources of research. Knowledge of biology, chemistry, pharmacology, manufacturing technology of medicine, epidemiology, microbiology, virology and immunology, economics and marketing, etc. is important for Masters of pharmacy in the formation of their professional competencies and usage in professional activity. Provisors should always be informed about the health of the population and the types of diseases that are circulating in their area. Because, quite often, they have to embody not only the function of selling medicine, but also the selection of their analogs, alternatives and so on. Provisors often help to determine which medicine to choose for the patient. Those needs are the most acute during the epidemiological morbidity of the population.

The professional training of future Masters of pharmacy requires appropriate compliance with the rules, regulations and standards of the European Higher Pharmaceutical Education Area. The leading goal of the possible innovation in education is the training of highly qualified specialists Masters of pharmacy, who, in addition to their professional skills, will have such qualities as mobility and competitiveness not only in the national, but also in the world labor market (Karpenko, 2014).

In 2011, The concept "Pharmatist of Seven Stars" (joint FIP / WHO guidelines on good pharmacy practice: standards for quality of pharmacy services, 2011) was developed on the joint recommendations of WHO and the International Pharmacists' Federation: Good Pharmacy Practice: Pharmacy Service Quality Standards. It says that:

– a specialist providing high quality pharmaceutical assistance;

– the person making the qualified decision;

– communicator a specialist who is the intermediary between the doctor and the person in need of pharmaceutical care;

– manager an employee with managerial qualities, with economic and financial knowledge;

– lifelong learner a specialist who obtains and updates his/her professional knowledge, starting from basic education and throughout his/her career;

– mentor to be a facilitator for his colleagues and mentees;

– a leader an employee who is able to make management decisions in complex situations that are aimed at the well-being of the patient and the general population.

Among the well-known scientists who have made significant contributions to the pharmaceutical field, the following researchers are worth to mention: F.I. Gize, E.S. Gordienko, Y.A. Gromov, G.G. Koritari, A.D. Chirikov, and M. O Valyashko, O.I. Cherkes and others. At the same time, the works of scientists engaged in the study of the development of pharmaceutical education and professional training of specialists in the pharmaceutical field, in particular, are the scientific developments of K. Amosova, D. Volokh, B. Gromovik, B. Zimenkovsky, I. Zupants, and Z. Mnushko. , T. Kalyniuk, L. Kaydalova, A. Nemchenko, M. Syatin, V. Tolochko, Y. Tsehmister, V. Chernykh, O. Chaliy and others. Important changes in the social and economic relations in the current Ukrainian society require the training of specialists in new, not traditional forms (Provision on distance learning at National University of Pharmacy, 2016): network, mixed, distance, etc.; these forms of education are regulated by the following regulatory framework:

– Law of Ukraine "On Education" No. 1060-XII of May 23, 1991, as amended (Verkhovna Rada of Ukraine. Legislation of Ukraine, 2011);

– Law of Ukraine "On Higher Education" edition of 09.08.2019 № 1556-VII (Verkhovna Rada of Ukraine. Legislation of Ukraine, 2019);

– Law of Ukraine "On Basic Principles of Development of the Information Society in Ukraine for 2007-2015" No. 537-V of 09.01.2007 (Verkhovna Rada of Ukraine. Legislation of Ukraine, 2007);

– Decree of the Ministry of Education and Science of Ukraine No. 466 of April 25, 2013 "Provision on Distance Learning" (Verkhovna Rada of Ukraine. Legislation of Ukraine, 2013a);

– Decree of the Ministry of Education and Science of Ukraine No. 1518 of 30.10.2013 "Requirements for higher educational establishments and institutions of postgraduate education, scientific

and educational institutions providing educational services in distance learning (training and advanced training of specialists in accredited fields and specialties)" (Verkhovna Rada of Ukraine. Legislation of Ukraine, 2013b);

Decree of the Ministry of Education and Science of Ukraine No. 450 dated August 7, 2002 "On approval of the norms of time for planning and accounting of educational work and lists of the main types of methodological, scientific and organizational work of pedagogical and scientific-pedagogical employees of higher educational institutions" (Verkhovna Rada of Ukraine. Legislation of Ukraine , 2002).

The purpose of the paper is to analyze the state of preparation of Masters of pharmacy in the study of microbiology, virology and immunology in the conditions of society informatization.

Methods: theoretical (generalization, analysis and synthesis in order to find out the state and level of development of the problem under study, regarding the readiness of Masters of pharmacy to use remote technologies in the process of learning); empirical (expert evaluation and self-assessment methods; questionnaire).

Results and discussion. The growth of the role and status of Masters of pharmacy is observed in the period of high technology development in the world society. This can be explained, firstly, by certain progressive lines of development in the medical, pharmaceutical and pharmacology fields (trends in the upgrading of industry technologies, means and devices of professional use, growth of the range of medicines), and secondly, by corresponding demographic trends, such as an increase in the number of diseases that are combined with the way of life of people, life expectancy, chronic diseases, thirdly, the emergence of new strains of viruses and bacteria due to mutations, the appearance of new genetically engineered biological medicine and so on. All these factors lead to the emergence of new specialists in the field of pharmacy clinical pharmacists who will combine the analytical thinking of the doctor and pharmaceutical knowledge (Clinical Pharmacy Educational Program, 2016, pp. 2). Microbiology, virology, immunology, pharmacology, genetic engineering, and dynamically changing sciences are at the forefront of knowledge of these specialists. This, in turn, necessitates the renewal of basic knowledge gained in these disciplines through distance learning.

Higher pharmaceutical education can be obtained both on a full-time and part-time basis. Recently, there has been a tendency to increase the number of students who want to get pharmaceutical education on part-time basis. We conducted a survey of part-time students of the Faculty of Pharmacy through testing. The purpose of this study was to establish a primary level of knowledge in biology, microbiology, virology and immunology. The test form included 10 questions on the biology course that students studied in their first year of study.

The test data were evaluated on a 5-point scale using the following criteria: 5 points 10 correct answers (meets high level of knowledge). 4 points 8-9 correct answers (sufficient level of knowledge), 3 points 6 7 correct answers (satisfactory level of knowledge), 2 points 5 and less correct answers (low level of knowledge).

Analyzing the results of the study *(shown in Fig. 1)* it can be seen that over 51% of students have a low level of knowledge, 33% satisfactory and only about 16% a sufficient level. We come to the conclusion that there is a need to introduce a new method of training future employees of the pharmaceutical industry remote one, which is based on new information technologies that are combined with the principles of self-education.

Distance learning provides an opportunity for each student to choose his own convenient time to master the study material, without limiting his classroom framework. This form of study is a flexible, individualized process that allows you to study and work, optimize your free time, choose the best teachers and work on more advanced programs, both online and offline, without being within the walls of the educational institution.

We conducted an experiment to introduce distance learning of microbiology, virology and immunology to students of the Faculty of Pharmacy with the purpose of comparative analysis of competences of students of correspondence form of study.

The *Table 1* shows the values of the average assessment of practical classes and final control of knowledge of students of the experimental group and the control group.

Notes: Distribution law of indicators was different from the normal one; median value and interquartile range were calculated for data presentation. The Mann-Whitney test was used in the comparison.

The comparison showed an average assessment

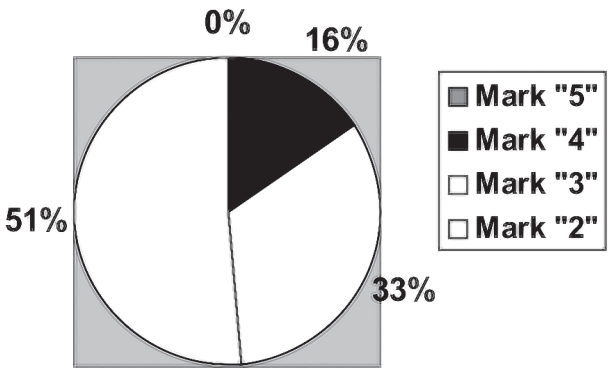

Fig. 1. Assessment of part-time students' knowledge in Biology; the Faculty of Pharmacy

Table 1

Comparison of learning outcomes of students of control and experimental groups

Measure indicator	Me (QI – QIII)		Difference significance level, p
	Control group (n=46)	Experimental group (n=53)	
Average assessment for practical lessons	6,2 (6,0 – 6,2)	9,4 (8,8 – 9,7)	<0,001
Assessment of final knowledge control	50 (20 – 50)	50 (50 – 60)	<0,001

increase (p <0.001) for practical training in the experimental group, compared with the control group by 3.1 points in average (95% CI 2.8 points – 3.2 points). There was also an assessment increase (p <0.001) of the final knowledge control in the experimental group compared to the control group by 10 points in average (95% CI 0 points – 20 points).

The urgency of the problem of the study of distance learning of future Masters of Pharmacy is exacerbated by the revealed contradictions between:

– the development of the pharmaceutical industry, which is undergoing significant changes and requires continuous scientific and educational support and the lack of a flexible system of distance learning for future Masters of Pharmacy;

– the need to solve the problems of effective therapy, pharmaceutical care, prevention of infectious diseases and the lack of innovative adaptive methodological training systems for future Masters of Pharmacy;

– the need for changes in updating the system of education of future Masters of Pharmacy and insufficient addressing of these issues at different levels of education;

– innovative conditions and needs of the public in the conditions of globalization of society and the inability of pharmaceutical industry employees to adapt to them;

– changing requirements for the professional competencies of specialists in the pharmaceutical industry and lack of preparedness for the higher education system (Kaidalova, 2011).

Solving these problems points to the need to rethink and modernize the purpose, contents and tasks of future Masters of Pharmacy. It is believed that such a system should be aimed at the formation of professional knowledge of future Masters of Pharmacy, continuous improvement of professional competences, meaningful practical application of the obtained theoretical knowledge and the acquisition of new information that appears in the scientific space, the formation of appropriate skills.

Conclusions. Today requires careful study, understanding and improvement of methodological assistance to future Masters of Pharmacy. Currently, it points to the need to review the foreign experience of teaching future Masters of pharmacy in this direction (with the possibility of borrowing some aspects), in particular, in the field of continuity of education and integration of knowledge from different disciplines the introduction of distance learning. It is explained by the emergence of new infectious diseases, mutation of bacteria and viruses, which are one of the strongest means of natural selection; the dynamics of modern immunology; innovations in the field of viral biochemistry, biotechnology and molecular biology, genetics, ontogeny and pathogenesis. Introducing distance education in the pharmaceutical healthcare industry will help to prepare a highly intelligent, versatile educated employee in the healthcare industry who will be able to provide qualitative pharmaceutical assistance at all levels, deepen and embody his knowledge throughout his life.

List of references

DOCPLAYER, 2016. *Положення про дистанційну форму навчання в національному фармацевтичному університеті. Пол. А.2.2-15-032.* [online] Доступно: <https://docplayer.net/86440617-Polozhennya-pro-distanciynu-formu-navchannya-v-nacionalnomu-farmacevtichnomu-universiteti.html>[Дата звернення 20 Вересень 2019].

Верховна Рада України. Законодавство України, 2002. Наказ МОН України, 2002, від 07.08.2002 р. № 450 *«Про затвердження норм часу для планування і обліку навчальної роботи та переліків основних видів методичної, наукової й організаційної роботи педагогічних і науково-педагогічних працівників вищих навчальних закладів».* [online] (Останнє оновлення 07 Серпень 2013) Доступно: <https://zakon.rada.gov.ua/laws/show/z0698-02> [Дата звернення 20 Вересень 2019].

Верховна Рада України. Законодавство України, 2007. *Закон України «Про основні засади розвитку інформаційного суспільства в Україні на 2007-2015 роки» від 09.01.2007 р. № 537-V.* [online] (Останнє оновлення 06 Лютий 2007) Доступно: <https://zakon.rada.gov.ua/laws/show/537-16> [Дата звернення 20 Вересень 2019].

Верховна Рада України. Законодавство України, 2011. *Закон України «Про освіту» від 05.09.2017 р. № 2145-VIII.* [online] (Останнє оновлення 09 Серпень 2019) Доступно: <https://zakon3.rada.gov.ua/laws/show/2145-19> [Дата звернення 20 Вересень 2019].

Верховна Рада України. Законодавство України, 2013a. Наказ МОН України 2013a від 25.04.2013 р. № 466 *«Положення про дистанційне навчання».* [online] (Останнє оновлення 21 Серпень 2015) Доступно: <https://zakon.rada.gov.ua/laws/show/z0703-13> [Дата звернення 20 Вересень 2019].

Верховна Рада України. Законодавство України, 2013b. Наказ МОН України 2013b, від 30.10.2013 р. № 1518 *«Вимоги до вищих навчальних закладів та закладів післядипломної освіти, наукових, освітньо-наукових установ, що надають освітні послуги за дистанційною формою навчання з підготовки та підвищення кваліфікації фахівців за акредитованими напрямами і спеціальностями».* [online] (Останнє оновлення 30 Жовтень 2013) Доступно: <https://zakon.rada.gov.ua/laws/show/z1857-13> [Дата звернення 20 Вересень 2019].

Верховна Рада України. Законодавство України, 2019. *Закон України «Про вищу освіту» редакція від 09.08.2019 р. № 1556-VII.* [online] (Останнє оновлення 09 Серпень 2019) Доступно: <https://zakon.rada.gov.ua/laws/show/1556-18> [Дата звернення 20 Вересень 2019].

Власенко, І. Г., 2017. Впровадження дистанційного навчання – вимога Сучасності. В: *Дистанційне навчання як сучасна освітня технологія: матеріали міжвузівського вебінару.* Вінниця, Україна, 31 Березень 2017. Вінниця : ВТЕІ КНТЕУ, [online], с. 12-14.

Кайдалова, Л. Г., 2011. *Теоретичні та методичні засади неперервної професійної підготовки майбутніх фахівців фармацевтичного профілю:* автореф. Доктор наук. Класичний приватний університет (м. Запоріжжя).

Карпенко, М. М., 2014. Розвиток дистанційного навчання як відповідь на сучасні виклики для України. *Стратегічні пріоритети,* [online] 4(33), с. 102-105. Доступно: <http://sp.niss.gov.ua/content/articles/fi les/18-1435918091.pdf> [Дата звернення 20 Вересень 2019].

Освітня програма «Клінічна фармація», 2016. *Молодість фармації: газета національного фармацевтичного університету,* 3 (142), с. 2.

Joint FIP / WHO Guidelines on Good Pharmacy Practice: standards for quality of pharmacy services, 2011. *WHO Technical Report Series,* 961, [online] Доступно: <http://mtd.dec.gov.ua/images/doc/GPP_2011_FIP.pdf> [Дата звернення 20 Вересень 2019].

Translated & Transliterated

DOCPLAYER, 2016. *Polozhennia pro dystantsiinu formu navchannia v natsionalnomu farmatsevtychnomu universyteti [Provision on distance learning at National University of Pharmacy].* Pol. A.2.2-15-032. [online] Dostupno: <https://docplayer.net/86440617-Polozhennya-pro-distanciynu-formu-navchannya-v-nacionalnomu-farmacevtichnomu-universiteti.html>[Data zvernennia 20 Veresen 2019], [in Ukrainian].

Verkhovna Rada Ukrainy. Zakonodavstvo Ukrainy [Verkhovna Rada of Ukraine. Legislation of Ukraine], 2002. *Nakaz MON Ukrainy, 2002, vid 07.08.2002 r. № 450 «Pro zatverdzhennia norm chasu dlia planuvannia i obliku navchalnoi roboty ta perelikiv osnovnykh vydiv metodychnoi, naukovoi y orhanizatsiinoi roboty pedahohichnykh i naukovo-pedahohichnykh pratsivnykiv vyshchykh navchalnykh zakladiv» [Decree of the Ministry of Education and Science of Ukraine, 2002, from 07.08.2002 № 450 «On approval of the norms of time for planning and accounting of educational work and lists of the main types of methodological, scientific and organizational work of pedagogical and scientific-pedagogical workers of higher educational institutions»].* [online] (Ostannie onovlennia 07 Serpen 2013) Dostupno: <https://zakon.rada.gov.ua/laws/show/z0698-02> [Data zvernennia 20 Veresen 2019], [in Ukrainian].

Verkhovna Rada Ukrainy. Zakonodavstvo Ukrainy [Verkhovna Rada of Ukraine. Legislation of Ukraine], 2007. *Zakon Ukrainy «Pro osnovni zasady rozvytku informatsiinoho suspilstva v Ukraini na 2007-2015 roky» vid 09.01.2007 r. № 537-V [Law of Ukraine «On the Fundamental Principles of Information Society Development in Ukraine for 2007-2015» of 09.01.2007 No. 537-V].* [online] (Ostannie onovlennia 06 Liutyi 2007) Dostupno: <https://zakon.rada.gov.ua/laws/show/537-16> [Data zvernennia 20 Veresen 2019], [in Ukrainian].

Verkhovna Rada Ukrainy. Zakonodavstvo Ukrainy [Verkhovna Rada of Ukraine. Legislation of Ukraine], 2011. *Zakon Ukrainy «Pro osvitu» vid 05.09.2017 r. № 2145-VIII [Law of Ukraine «On Education» of 05.09.2017 № 2145-VIII].* [online] (Ostannie onovlennia 09 Serpen 2019) Dostupno: <https://zakon3.rada.gov.ua/laws/show/2145-19> [Data zvernennia 20 Veresen 2019], [in Ukrainian].

Verkhovna Rada Ukrainy. Zakonodavstvo Ukrainy [Verkhovna Rada of Ukraine. Legislation of Ukraine], 2013. *Nakaz MON Ukrainy 2013a vid 25.04.2013 r. № 466 «Polozhennia pro dystantsiine navchannia» [Decree of the Ministry of Education and Science of Ukraine 2013a dated April 25, 2013 No. 466 «Regulation on Distance Learning»].* [online] (Ostannie onovlennia 21 Serpen 2015) Dostupno: <https://zakon.rada.gov.ua/laws/show/z0703-13> [Data zvernennia 20 Veresen 2019], [in Ukrainian].

Verkhovna Rada Ukrainy. Zakonodavstvo Ukrainy [Verkhovna Rada of Ukraine. Legislation of Ukraine], 2013. *Nakaz MON Ukrainy 2013b, vid 30.10.2013 r. № 1518 «Vymohy do vyshchykh navchalnykh zakladiv ta zakladiv pisliadyplomnoi osvity, naukovykh, osvitno-naukovykh ustanov, shcho nadaiut osvitni posluhy za dystantsiinoiu formoiu navchannia z pidhotovky ta pidvyshchennia kvalifikatsii fakhivtsiv za akredytovanymy napriamamy i spetsialnostiamy» [Decree of the Ministry of Education and Science of Ukraine 2013b, dated 30.10.2013, № 1518 «Requirements for higher educational establishments and institutions of postgraduate education, scientific, educational and scientific institutions providing educational services in the distance form of training and advanced training of specialists in accredited fields and specialties»].* [online] (Ostannie onovlennia 30 Zhovten 2013) Dostupno: <https://zakon.rada.gov.ua/laws/show/z1857-13> [Data zvernennia 20 Veresen 2019], [in Ukrainian].

Verkhovna Rada Ukrainy. Zakonodavstvo Ukrainy [Verkhovna Rada of Ukraine. Legislation of Ukraine], 2019. *Zakon Ukrainy «Pro vyshchu osvitu» redaktsiia vid 09.08.2019 r. № 1556-VII [Law of Ukraine «On Higher Education» edition of 09.08.2019 № 1556-VII.].* [online] (Ostannie onovlennia 09 Serpen 2019) Dostupno: <https://zakon.rada.gov.ua/laws/show/1556-18> [Data zvernennia 20 Veresen 2019], [in Ukrainian].

Vlasenko, I. H., 2017. Vprovadzhennia dystantsiinoho navchannia – vymoha Suchasnosti *[Introduction of distance learning is a requirement of Modernity]. V: Dystantsiine navchannia yak suchasna osvitnia tekhnolohiia: materialy mizhvuzivskoho vebinaru [In: Distance Learning as a Modern Educational Technology: Intercollegiate Webinar Materials]*. Vinnytsia, Ukraina, 31 Berezen 2017. Vinnytsia: VTEI KNTEU, [online], s. 12-14, [in Ukrainian].

Kaidalova, L. H., 2011. *Teoretychni ta metodychni zasady neperervnoi profesiinoi pidhotovky maibutnikh fakhivtsiv farmatsevtychnoho profiliu: avtoref. [Theoretical and methodological foundations of continuous professional training of future specialists of pharmaceutical profile: abstract]. Doktor nauk. Klasychnyi pryvatnyi universytet (m. Zaporizhzhia) [Ph.D. Classic Private University (Zaporizhzhia],* [in Ukrainian].

Karpenko, M. M., 2014. Rozvytok dystantsiinoho navchannia yak vidpovid na suchasni vyklyky dlia Ukrainy [*Development of distance learning in response to current challenges for Ukraine]. Stratehichni priorytety [Strategic Priorities],* [online] 4(33), s. 102-105. Dostupno: <http://sp.niss.gov.ua/content/articles/fi les/18-1435918091.pdf> [Data zvernennia 20 Veresen 2019], [in Ukrainian].

Osvitnia prohrama «Klinichna farmatsiia» *[Clinical Pharmacy Educational Program], 2016. Molodist farmatsii: hazeta natsionalnoho farmatsevtychnoho universytetu [Youth of Pharmacy: Newspaper of National University of Pharmacy]*, 3 (142), s. 2, [in Ukrainian].

Joint FIP / WHO Guidelines on Good Pharmacy Practice: standards for quality of pharmacy services, 2011. *WHO Technical Report Series,* 961, [online] Dostupno: <http://mtd.dec.gov.ua/images/doc/GPP_2011_FIP.pdf> [Data zvernennia 20 Veresen 2019], [in English].

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Безперервне професійне навчання працівників фармацевтичної галузі засобами дистанційних технологій

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Реферат.

Актуальність: необхідність розробки та експериментальної перевірки безперервного навчання, зокрема мікробіології, вірусології та імунології майбутніх магістрів фармації, як під час самого навчання у вищому навчальному закладі, так і після його закінчення, під час професійної кар'єри в умовах інформатизації суспільства.

Мета: аналіз стану підготовки магістрів фармації при вивченні мікробіології, вірусології та імунології в умовах інформатизації суспільства.

Методи: теоретичні (аналіз, синтез, узагальнення); емпіричні (експертного оцінювання, самооцінки, анкетування).

Результати: запропоновано модернізаційне оновлення мети і змісту навчання мікробіології, вірусології та імунології майбутніх магістрів фармації. Здійснено спробу впровадження такої системи навчання, яка була б спрямованою на формування професійних знань майбутніх магістрів фармації, неперервне вдосконалення професійних компетентностей, осмисленого практичного застосування отриманих теоретичних знань та одержання нових знань, що з'являються в науковому просторі, формування відповідних умінь і навичок, створенню ефективних комунікацій у професійному фармацевтичному середовищі за допомогою дистанційних технологій.

Висновки: автором доведено, що професія провізора за своєю сутністю є процесом постійного саморозвитку та самовдосконалення, без яких неможлива їхня ефективна фармацевтична діяльність. Враховуючи те, що фармацевтична галузь зазнала суттєвих змін, в порівнянні з минулим століттям, та потребує безперервної наукової та навчальної освіти, зроблено висновок, що сучасний провізор повинен отримати можливість підвищувати особисту професійну кваліфікацію у зручний для нього час, дистанційно, в тому числі як в режимі online, так і в режимі offline.

Ключові слова: *дистанційне навчання, заклад освіти, інформаційні технології, магістр, навчання, освітній процес, підготовка, провізор, фармація.*

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INSTITUTE OF VOCATIONAL EDUCATION AND TRAINING OF NAES OF UKRAINE

DEVELOPING ENTREPRENEURIAL COMPETENCY OF FUTURE QUALIFIED SPECIALISTS USING SELF-MANAGEMENT TECHNOLOGY

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Abstract.

Relevance: market relations reforms in Ukraine determine changes in the system of national professional education. They primarily refer to the need to prepare young specialists for successful personal and professional self-realization under the conditions of small business development.

Aim: the paper aims to theoretically justify the expediency of using self-management technology in the process of developing entrepreneurial competency in future specialists under the conditions of changing market relations in Ukraine and intensive development of small business.

Methods: external analysis of selected sources (to determine the historical circumstances and motives behind their creation and functioning as elements of specific social relations) and internal analysis (to study the characteristics of particular documents).

Results: the paper shows that specific changes in economic relations lead to dynamic transformational shifts in personal values of modern students. The category of time becomes crucial for young specialists in the context of moving from the post-industrial to the information society, characterized by innovations and rapid changes in working conditions. Self-management is becoming a vital skill of the young generation since it implies time management and self-development. International and national documents emphasize the importance of developing career, entrepreneurial and other key competencies, necessary for building a successful professional career and self-employment under the conditions of small business development. At the same time, Ukrainian professional education schools are not ready to prepare young people for the rational use of their personal and time resources.

Conclusions: Self-management technology is one of the most promising tasks for developing entrepreneurial competency under the conditions of small business development. The programme, titled «The Basics of Innovative Entrepreneurship», has been developed to overcome the imbalance between the development of professional and key competencies and the improvement of psycho-pedagogical and legal training of young specialists for self-employment under the conditions of changing market relations. Its essential component is self-management technology. The paper also describes the main components of this technology (gnostic, designing, communicative, organizational, constructive), as well as the stages of its implementation.

Keywords: *professional education, self-management, key competencies, career competency, entrepreneurial competency.*

Introduction. The changes in the economic paradigm of the development of society and the state objectively determine the need to reform the educational paradigm. The Pro-European Development of Ukraine defines the vectors for reforming all spheres of life, including education. Therefore, the state determines the main areas of reforming market relations, and the education system aims to prepare young specialists for successful personal and professional self-realization under the new market conditions. The state and the government use the world best practices in building economic relations when implementing the national economic policy. Thus, educational managers should

adhere to fundamental educational trends which can maximize the professional adaptation and integration of the young generation of Ukrainian specialists in the system of Ukrainian and international relations. The Pro-European Development of Ukraine consolidates the democratic gains of the Ukrainian people, including economic freedoms and freedom of enterprise. This socio-economic phenomenon is decisive in the development of a powerful middle class that underlies the development of a democratic society. It is a class of successful people who can provide for themselves and their families since it is necessary to meet not only the primary vital needs but also social and spiritual ones. The development of such a specialist who has professional, entrepreneurial, social, civic and other key competences is the primary goal of the national system of professional education.

Thus, it is essential to study the conditions and elaborate specific mechanisms for developing entrepreneurial competency in future specialists in Ukrainian professional (vocational) education schools and professional pre-higher education institutions. Considerable attention should be paid to self-management as a set of processes, rational forms, methods and techniques designed to ensure cognition and self-development of the individual, effective monitoring of his or her activities and results, scientific focus of labour and develop readiness for success, drafting and implementation of a strategy of personal and career development.

The paper **aims** to theoretically justify the expediency of using self-management technology in the process of developing entrepreneurial competency in future specialists under the conditions of changing market relations in Ukraine and intensive development of small business.

Methods. The following classical methods have been used to achieve the set aim: external analysis of selected sources (to determine the historical circumstances and motives behind their creation and functioning as elements of specific social relations), internal analysis (to study the characteristics of particular documents), comparison (to identify the differences and similarities in approaches to defining the role of key competencies), generalization (to select relevant pedagogical tools for developing entrepreneurial competency under the conditions of small business development).

Sources: international documents (Copenhagen Declaration (2002), Bruges Communiqu? (2010), proceedings of international economic forums; laws of Ukraine ("On Education" (2017), "On Vocational Education and Training" (1998), "On Development and State Support for Small and Medium-Sized Entrepreneurship in Ukraine" (2012); other national documents (The National Programme for the Promotion of Small Business Development in Ukraine (2000), The National Doctrine of Education Development in Ukraine in the 21st Century (2002), The National Strategy for the Development of Education in Ukraine for 2012-2021 (2009), The Sustainable Development Strategy Ukraine – 2020 (2015), The New Ukrainian School Concept (2016), The Strategy for the Development of Small and Medium-Sized Entrepreneurship in Ukraine until 2020 (2017), The Mid-Term Government Priority Action Plan up to 2020 (2017); reports prepared by the laboratory of professional career at the Institute of VET of the NAES of Ukraine (2016-2018), analytical and statistical materials of the Verkhovna Rada Committee on Education, Science and Innovation, the Ministry of Education and Science of Ukraine, State Statistics Service of Ukraine, State Employment Service; Internet resources (HeadHunter, UNESCO Database, Eurostat Educational Statistics); publications of Ukrainian researchers on the issues of developing career, entrepreneurial and other key competences of future specialists (A. Alieksieieva, B. Dratver, D. Zakatnov, V. Machuskyi, V. Orlov, N. Pasichnyk, V. Radkevych et al.).

Results and discussion. A characteristic feature of economic reforms in the 21st century is the humanization of economic terms. It is crucial to shift the emphasis from the generation of productive forces to the development of human capital, the transition from a knowledge-based educational paradigm to a competency-based philosophy of education. A working man becomes an unconditional participant in building economic relations. The changes in economic relations lead to dynamic transformational shifts in the values of modern pupils and students. Young people's perception of the role of knowledge, the status of education, professionalism, career and career success has changed tremendously (Yershov, 2018, pp. 163). All these changes are, to some extent, based on the changes in the temporal paradigm of professional growth. The category of time becomes crucial for young specialists in the context of moving from the post-industrial to the information society, characterized by innovations and rapid changes in working conditions. Self-management is becoming a vital skill of the young generation since it implies time management and self-development. In other words, self-management becomes one of the tops of pedagogical technologies.

One should pay particular attention to some of the most well-known conceptual approaches to defining this phenomenon: an optimal use of time (L. Zayvert), testing one's capabilities, overcoming personal limitations (D. Francis, M. Woodcock), self-development of a creative personality for self-realization in various activities (V. Andreiev), raising the level

of one's business culture (O. Khrolenko), achieving personal success, career realization (B. Schwalbe, H. Schwalbe). Thus, the category of time is common to all concepts, incorporating the basic ideas of each approach to the strategy of the individual's personal and career development.

At the same time, such factors as the current state of vocational guidance for pupils, their preparation for the pursuit of a professional career, readiness for professional success and the opening of one's business reveal a significant pedagogical problem, that is the inability of young people to effectively manage their own time and develop their personality (Dratver et al., 2004; Zakatnov, 2007; 2009; 2015; Radkevych, 2012a; 2012b). A survey of pupils from professional (vocational) education schools conducted by the employees of the laboratory of professional career at the Institute of VET of the NAES of Ukraine (2016-2018) (Zakatnov, 2017) also shows the irrational approach of young people to the use of personal time.

The results of the survey show that 9.3% of pupils entered professional (vocational) education schools only because they were bored with school; 18.5% of them sought to simplify their entry to a higher education institution, and 7% of them failed to enter another educational institution. That is, 34.8% of pupils did not have a clear idea about the future profession when entering professional (vocational) education schools *(see Fig. 1)*.

Spontaneity and impulsivity remain very powerful factors in the focusing of intellectual, physical and emotional efforts of the individual on the path to professional growth. The results of the survey show that 47.5% of pupils are unsure about the correctness of their choice; 6.2% of them recognize the complete mismatch between the profile of the chosen profession and their personal needs; 24.6% of them have significant doubts about the prestige of the chosen profession. These figures conceal the so-called long-delay time bomb for many young people *(see Fig. 2)*. A person who has made a mistake in choosing a profession loses not only time (since he or she is forced to retrain in the future, that is, to restart professional career), but also confidence (because he or she is aware of his or her lagging behind more successful peers). Uncertainty causes insecurities that hinder the development of both career and entrepreneurial competencies. In a digital society, managing time means managing one's life and success.

The study of pupils' motivation towards success allows classifying their motives into external and internal *(see Table 1)*. The most powerful external motives for pupils are financial support and parents' connections (9%). Internal factors based on higher-level needs have roughly equal percentages: professionalism and good education (13.4%), self-confidence and high aspirations (13.8%), clear life principles and goals (12.6 %), responsibility and personal standards (11.8%), volition (11.5%). One should pay specific attention to the percentage of qualities based on lower-level needs: flexibility, ability to adapt to changes (13%) and ability "to play without rules", using all the means to achieve success (8.7%), which are perceived by this category of pupils as most favourable for career success.

A gender-based approach to analyzing pupils' perceptions of factors in professional success reveals that male pupils (493) consider "playing without rules" as a factor of professional success more often than female pupils (418) *(see Fig. 3)*.

It must be acknowledged that girls (678) are less confident in comparison with boys (765) which confirms the well-known statement that men are more likely to be at risk *(see Fig. 4)*.

The experiment shows that pupils' perceptions of their careers are determined by personal characteristics, life goals, values and personality traits; gender characteristics; the level of aspirations and development of pupils' self-esteem; the characteristics of their cognition and emotional sphere; worldview, knowledge about the profession, people, society; traditions of family education, a financial

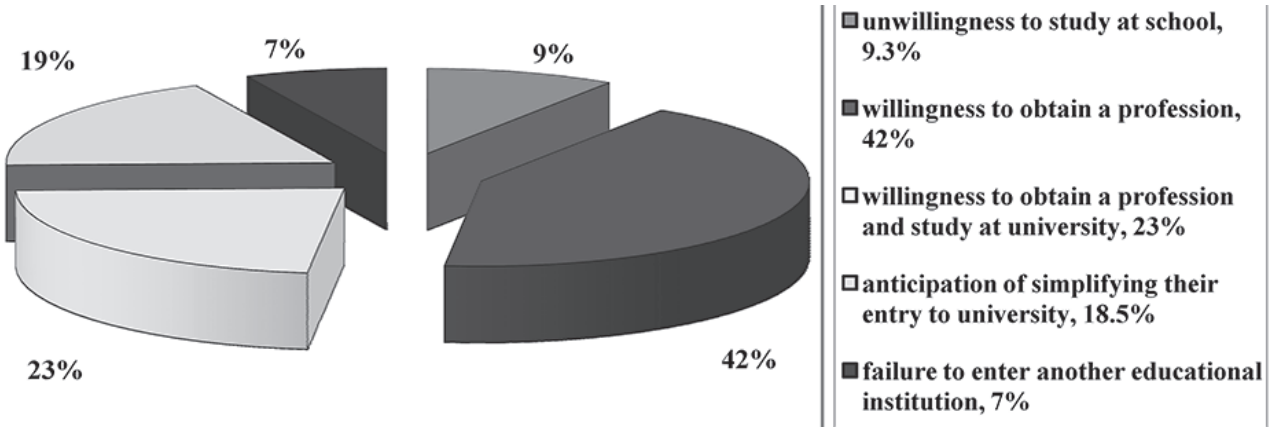

Fig. 1. Pupils' motives for entering professional (vocational) education schools (Zakatnov, 2017)

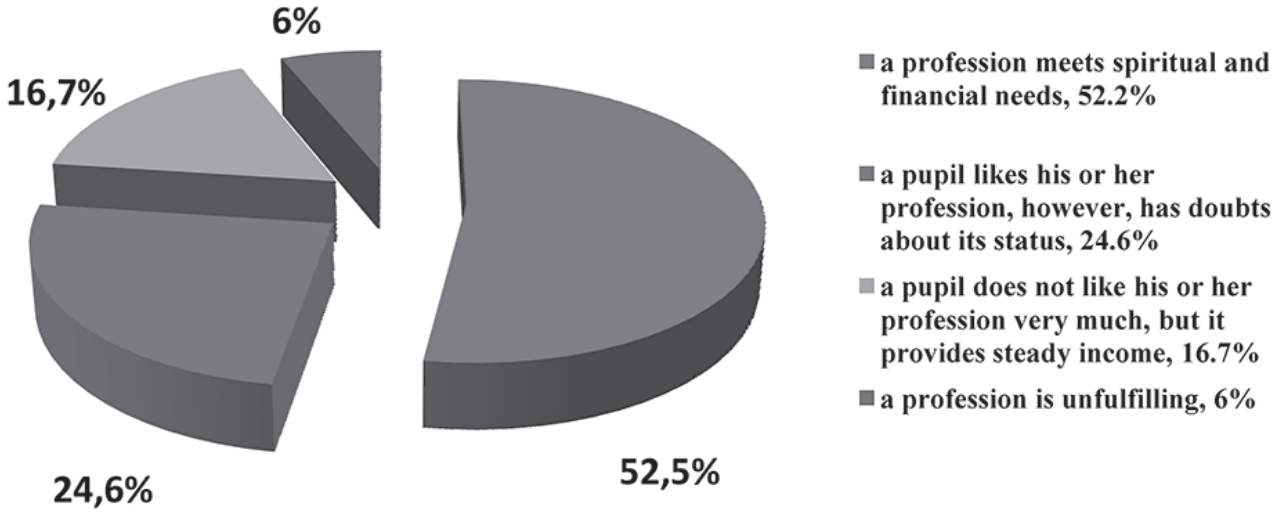

Fig. 2. The relevance of the chosen profession to the personal needs of pupils from professional (vocational) education schools (based on the survey of 1690 pupils) (Zakatnov, 2017)

Table 1

Pupils' perceptions of the factors in professional success

	Factors	Year 1			Year 2			Year 3			Total	%
		Girls	Boys	Total	Girls	Boys	Total	Girls	Boys	Total		
	External factors											
1	Financial security and parents' connections	134	131	265	149	167	316	154	198	352	933	9
2	A favourable situation in the country	30	36	66	38	58	96	78	67	145	307	2,95
3	Friendly ties	9	6	15	3	8	11	3	4	7	33	0,3
4	Conditions and facilities	31	45	76	39	45	84	54	84	138	298	2,9
	Total, external factors	204	218	422	190	233	507	235	269	642	1571	15,1
	Internal factors based on higher-level needs											
5	Good education, professionalism	193	236	429	236	299	535	218	218	436	1400	13,4
6	Self-confidence, high aspirations	249	228	477	197	279	476	232	258	490	1443	13,8
7	Clear life principles and goals	183	257	440	169	267	436	219	219	438	1314	12,6
8	Responsibility and personal standards	196	181	377	171	265	436	245	176	421	1234	11,8
9	Volition	132	191	323	183	216	399	283	192	475	1197	11,5
	Total, internal factors 1	953	1093	2046	956	1326	2282	1197	1063	2260	6588	63,2
	based on lower-level needs											
10	Flexibility, ability to adapt to changes	268	195	463	181	189	370	256	264	520	1353	13
11	Ability "to play without rules", using all the means to achieve success	157	132	289	96	178	274	165	183	348	911	8,7
	Total, internal factors 2	425	327	752	277	367	644	421	447	868	2264	21,7
	Total										10423	100

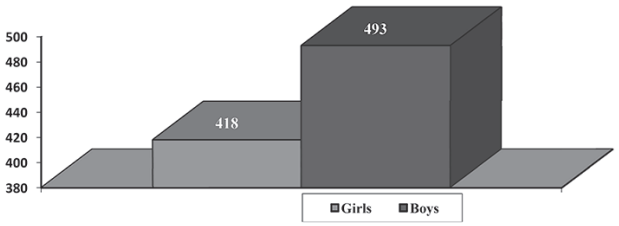

Fig. 3. Gender characteristics of pupils' views on "playing without rules" as a factor of professional success

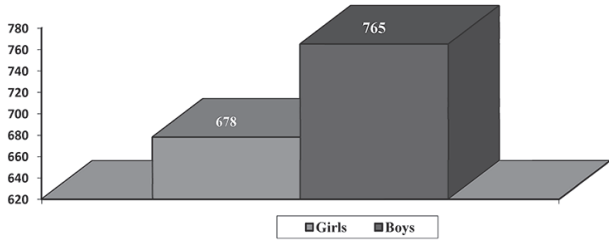

Fig. 4. Gender characteristics of pupils' views on self-confidence as a factor of professional success

status of their families; economic and socio-political circumstances. The nature of these representations is as follows: dissipative (unclear, devoid of specific content); conformal (relaying authoritative thoughts); pragmatic ("professional growth" is more associated with administrative rather than professional careers; "professional success" is more related to prestige and social status rather than social responsibility; the need for power is connected with the pursuit of greater rights and privileges rather than socially relevant actions).

These data are of paramount interest in the context of developing entrepreneurial competency since they reflect the weak value matrix of pupils from professional (vocational) education schools, as well as the poor personal qualities required to open and run their businesses successfully.

This is mainly due to the fact that, following current regulations, the requirements for a socio-humanistic component of future specialists' professional training are advisory. As a result, social sciences and humanities are often perceived as "secondary" and "optional" in professional (vocational) education. Therefore, the quality of developing pupils' personal traits and qualities necessary for developing entrepreneurial competency traditionally depends on psycho-pedagogical culture and values of leaders of educational institutions and teachers (Yershova, 2017, pp. 25; 218a, pp. 25).

The time-related aspect of this problem is the conservatism of the education system itself. Traditional formal education fails to follow the intense changes caused by the digital revolution. This causes a rapid decline in the prestige of education in many industries (Yershov, 2018, pp. 76). Analytical materials from specific reputable Internet resources (Eurostat Educational Statistics, UNESCO Database, HeadHunter) prove that the authority of very time-consuming formal education is declining rapidly. For one, 56% of IT specialists aged 26 to 35 do not have a university degree since they prefer non-formal and informal education, which gives them the necessary skills and knowledge in a much shorter time. Employers of many IT companies are more interested in recruiting employees who have certificates from popular courses rather than university degrees. The HeadHunter Research Center reports that Ukrainian employees rank a university degree in IT only fifth most influential factor for successful employment. The widespread dissemination of detailed workshops for completing many professional tasks using the latest materials and innovative equipment on the Internet often pose a severe competition with not quite modern methods and technologies used in many professional (vocational) education schools.

Besides, the formal education system has not yet been able to harmonize the development of professional and key (flexible) skills that have a decisive influence on specialists' ability to rely on their resources and implement a programme of personal and professional growth (Seredina, 2018, pp. 95; Odnoroh, 2018, pp. 105; Lemeshko, 2018, pp. 101). In the system of formal education, the process of developing digital skills and culture of pupils remains problematic as well (Bazeliuk, 2018; 2019; Yershov, 2019), which are very important for developing entrepreneurial competency. Underestimating the role of key skills in professional training of future specialists can lead to several consequences impeding the development of young people's readiness for personal and professional success. These include graduates' lack of relevant knowledge about intellectual, physical and emotional reserves of the individual's development; the underdeveloped "self-concept", manifested by lack of self-observation, self-analysis, self-regulation, self-control and self-improvement; lack of time management needed to build a personal and professional growth programme.

The employees from the Institute of VET of the NAES of Ukraine have developed and released a programme of the course in the basics of innovative entrepreneurship for professional (vocational) education schools to solve this problem. This program aims to deepen the knowledge and skills of pupils from professional (vocational) education schools about entrepreneurship when studying the courses in general economics and fundamentals of sector economics and entrepreneurship.

The educational course aims to develop entrepreneurial competency in pupils as a basis for successful professional self-realization, which will promote self-employment of young specialists, help them manage their lives and careers, stimulate active par-

ticipation in the economic and socio-political life of their country. Besides, it intends to develop a system of knowledge in the field of innovation economics, communication competency, social responsibility, self-knowledge and self-management skills.

Self-management is one of eight modules of the programme, which includes such topics as time-management, self-management and life-management. The first topic includes information about the characteristics of time as a resource; interviewing and negotiation technology; the basic requirements for workplace organization; identification of time consumers; working out an agenda; keeping a business diary. The second topic involves personality development; cognitive activity; temperament and character; emotions and volition; communication, aspirations and self-esteem of the individual; self-concept; limitations and incentives for personal development; conflicts in activities of entrepreneurs, their causes, consequences and ways of solving. The third topic aims to contribute to understanding the essence of personal and professional career; determining the individual's creative potential and vital, operational, tactical and strategic goals, individual style of management; implementation of life and career development planning; building strategies for their development; planning a job interview.

Other modules of the programme are closely linked to the development of future specialists' key competencies and ability to engage in self-management necessary to start and run their business. For one, the module, titled "Theoretical Foundations of Innovative Entrepreneurship" familiarizes pupils with the methods of generation, evaluation and presentation of innovative entrepreneurial ideas.

The module, titled "Planning Successful Business" reveals the content of the following critical psycho-pedagogical problems: building a successful image of an entrepreneur (developing readiness to succeed, understand and evaluate one's abilities; self-confidence); planning entrepreneurial success (a code of entrepreneurial behaviour, entrepreneurial culture, building strategies and tactics for success).

The module, titled "Communication in Business" presents information on verbal and non-verbal communication, communication technologies of self-presentation and reveals the communicative nature of business (stereotypes in business communication, communication barriers and solutions to them, manipulations in business communication).

The module, titled "Entrepreneurship Ethics and Corporate Social Responsibility" aims to familiarize pupils with ethical standards of human resources management and social responsibility in business.

Thus, graduates from professional (vocational) education schools can familiarize themselves with the main components of self-management: gnostic (reinforcing cognition, developing capability for self-observation and self-analysis), designing (promoting self-determination, self-prediction), communicative (involving the development of an internal strategy for interaction with other people, self-presentation, self-programming), organizational (organizing internal and external reserves of personality development), constructive (self-evaluation, self-control, self-correction, self-development).

Self-management must consist of several stages. At the first stage, pupils should learn to understand themselves, evaluate their abilities, explore the conditions of their educational and future professional and entrepreneurial activities, feel self-motived to open their business. At the second stage, they need to learn to make management decisions. At the third stage, they must learn how to plan algorithms of practical business actions, build a strategy of personal and professional development and develop business projects. At the fourth stage, it is essential for them to practically implement the stages of the developed strategy and their business ideas. At the fifth stage, they should be able to analyze the quality of the completed strategic goals of the self-development programme and evaluate the effectiveness of the completed business ideas and business projects.

Conclusions. The analyzed international and national documents emphasize the importance of developing career, entrepreneurial and other key competencies as crucial for educating a proactive personality and building a successful and economically independent state. In Ukraine, there is a discrepancy between the analyzed importance of entrepreneurial competency and the conditions for developing this competency in Ukrainian professional (vocational) education schools. It is vital to prepare young people to use their personal and time resources rationally. Self-management, which aims to provide pupils with appropriate psycho-pedagogical tools to start their business and be successful in business, is one of the most optimal for developing entrepreneurial competency under the conditions of small business development. The programme, titled "The Basics of Innovative Entrepreneurship" has been developed to overcome the imbalance between the development of professional and key competencies and the improvement of psycho-pedagogical and legal training of young specialists for self-employment under the conditions of changing market relations. Its essential component is self-management technology. The paper also presents the main components of this technology (gnostic, designing, communicative, organizational, constructive), as well as the stages of its implemen-tation. Further research should pay specific attention to the content and conditions of using self-management in professional (vocational) education schools.

List of References

Базелюк, О., 2018. Зміст і структура цифрової культури педагогічних працівників закладів професійної освіти. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка,* 16, с. 81-87. DOI: http://doi.org/10.32835/2223-5752.2018.16.81-87.

Базелюк, О.В., 2019. Цифровізація професійної освіти як глобальний соціоприродній процес. В: *Інформаційно-цифровий освітній простір України: трансформаційні процеси і перспективи розвитку*. Програма методологічного семінару (Київ, Україна, 4 Квітень 2019). К.: Інститут інформаційних технологій і засобів навчання НАПН України.

Дратвер, Б., Закатнов, Д., Мачуський, В. та Пасічник Н., 2004. *Основи підприємницької діяльності: навчальний посібник.* Кіровоград: Поліграфічно-видавничий центр «Імекс-ЛТД».

Єршова, Л., 2015. Формування референтної особистості як проблема освітньої практики сучасної України. *Вісник Черкаського університету. Серія: Педагогічні науки*, 6, с. 119-124.

Єршова, Л., 2017. Макроекономічні фактори впливу на розвиток професійної кар'єри учнів професійно-технічних навчальних закладів. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка,* 13, с. 22-29.

Єршова, Л., 2018 a. Соціально-психологічні фактори впливу на розвиток професійної кар'єри учнів професійно-технічних навчальних закладів. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка,* 14, с. 22-29. https://doi.org/10.32835/2223-5752.2017.14.22-29.

Єршова, Л., 2018 b. Від купця – до підприємця: трансформація цінностей української економічної еліти у XIX – на початку XX століття. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка,* 15, с. 154-161. https://doi.org/10.32835/2223-5752.2018.15.

Єршова, Л., 2018 c. Трансформація системи цінностей учнівської і студентської молоді в контексті реформування вітчизняної професійної освіти. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка,* 16, с. 162-168. DOI: http://doi.org/10.32835/2223-5752.2018.16.162-168.

Єршов, М.-О., 2018. Роль української ІТ-освіти на світовому ринку інформаційних товарів і послуг. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка,* 16, с. 74-81. DOI: http://doi.org/10.32835/2223-5752.2018.16.74-81.

Закатнов, Д.О., 2007. Організаційно-педагогічне забезпечення підготовки учнівської молоді до планування кар'єри. *Теоретико-методичні проблеми виховання дітей та учнівської молоді,* 10 (II), с. 373-381.

Закатнов, Д.О., 2009. Стан і проблеми професійної орієнтації. *Професійно-технічна освіта: інноваційний досвід, перспективи,* 1(6), с. 173-179.

Закатнов, Д., 2015. Профорієнтаційні засади кар'єрного розвитку учнівської молоді. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка*, 9, с. 86-94.

Закатнов, Д.О., 2017. Державний реєстраційний номер: 0116U003567. *Проектування системи консультування з професійної кар'єри учнів професійно-технічних навчальних закладів.* Лабораторія професійної кар'єри, ІПТО НАПН України, переглянуто 15 Жовтень 2019.

Лемешко, Л., 2016. Формування художньо-творчої компетентності техніків-конструкторів одягу як проблема професійної педагогіки. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка,* 16, с. 100-104. https://doi.org/10.32835/2223-5752.2018.16.100-104.

Однорог, Г., 2018. Теоретичні засади формування ключових компетентностей учнів у закладах професійної освіти засобами інтерактивних технологій. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка,* 16, с. 104-108. https://doi.org/10.32835/2223-5752.2018.16.104-108.

Радкевич, О.П., 2012a. Конфіденційність персональної інформації у соціальних мережах. *Вісник Вищої ради юстиції,* 3(11), с. 215-223.

Радкевич, О.П., 2012b. Забезпечення охорони і захисту персональної інформації у Сполучених Штатах Америки та Великій Британії. *Вісник Вищої ради юстиції*, 1(9), с. 141-153.

Радкевич, В., 2016. Теоретичні та методичні засади розвитку професійної освіти і навчання: результати, проблеми, перспективи. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка,* 11, с. 5-22.

Середіна, І., 2018. Підприємницька компетентність майбутніх бакалаврів з економіки підприємництва як науково-педагогічна проблема. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка,* 16, с. 94-96.

Яблуновська, К., 2018. Теоретичні основи формування екологічної компетентності майбутніх викладачів аграрних закладів вищої освіти. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка,* 15, с. 47-53. https://doi.org/10.32835/2223-5752.2018.15.47-53.

Yershov, M.-O., 2019. Digitalisation of professional (vocational) and pre-high tertiary education of Ukraine: problems and prospects. *Scientific herald of the Institute of vocational education and training of NAES of Ukraine. Professional Pedagogy,* 1(18), pp. 67-74. https://doi.org/10.32835/2223-5752.2019.18.67-74.

Translated & Transliterated

Bazeliuk, O., 2018. Zmist i struktura tsyfrovoi kultury pedahohichnykh pratsivnykiv zakladiv profesiinoi osvity [Content and structure of digital culture of VET institutions' teachers]. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPS Ukrainy. Profesiina pedahohika [Scientific herald of the Institute of vocational education and training of NAES of Ukraine. Professional Pedagogy],* 16, s. 81-87. DOI: http://doi.org/10.32835/2223-5752.2018.16.81-87, [in Ukrainian].

Bazeliuk, O.V., 2019. Tsyfrovizatsiia profesiinoi osvity yak hlobalnyi sotsiopryrodnii protses [Professional education transformation as a glibal socio-natural protest]. V: *Informatsiino-tsyfrovyi osvitnii prostir Ukrainy: transformatsiini protsesy i perspektyvy rozvytku. Prohrama metodolohichnoho seminaru [Information-digital education environment of Ukraine: transformation protests and development prospects]* (Kyiv, Ukraine, 4 Kviten 2019). K.: Instytut informatsiinykh tekhnolohii i zasobiv navchannia NAES Ukrainy, [in Ukrainian].

Dratver, B., Zakatnov, D., Machuskyi, V. ta Pasichnyk N., 2004. *Osnovy pidpryiemnytskoi diialnosti: navchalnyi posibnyk [The basics of entrepreneurial activities: a textbook]*. Kirovohrad: Polihrafichno-vydavnychyi tsentr «Imeks-LTD», [in Ukrainian].

Yershova, L., 2015. Formuvannia referentnoi osobystosti yak problema osvitnoi praktyky suchasnoi Ukrainy [The reference individual formation as a problem of the educational practices in modern Ukraine]. *Visnyk Cherkaskoho universytetu. Seriia: Pedahohichni nauky [Cherkasy university bulletin: Pedagogical sciences],* 6, s. 119-124, [in Ukrainian].

Yershova, L., 2017. Makroekonomichni faktory vplyvu na rozvytok profesiinoi kariery uchniv profesiino-tekhnichnykh navchalnykh zakladiv [Macroeconomic factors of influence on professional career development of vet institutions students]. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPN Ukrainy. Profesiina pedahohika [Scientific herald of the Institute of vocational education and training of NAES of Ukraine. Professional Pedagogy],* 13, s. 22-29, [in Ukrainian].

Yershova, L., 2018 a. Sotsialno-psykholohichni faktory vplyvu na rozvytok profesiinoi kariery uchniv profesiino-tekhnichnykh navchalnykh zakladiv [Socio-Psychological Factors of Influence on Professional Career of Students of Vocational Schools]. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPN Ukrainy. Profesiina pedahohika [Scientific herald of the Institute of vocational education and training of NAES of Ukraine. Professional Pedagogy],* 14, s. 22-29. https://doi.org/10.32835/2223-5752.2017.14.22-29, [in Ukrainian].

Yershova, L., 2018b. Vid kuptsia – do pidpryiemtsia: transformatsiia tsinnostei ukrainskoi ekonomichnoi elity u XIX – na pochatku XX stolittia [From a tradesman to an entrepreneur: the Ukrainian business leaders' values transformation in XIX and early XX centuries]. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPS Ukrainy. Profesiina pedahohika [Scientific herald of the Institute of vocational education and training of NAES of Ukraine. Professional Pedagogy],* 15, s. 154-161, [in Ukrainian].

Yershova, L., 2018c. Transformatsiia systemy tsinnostei uchnivskoi i studentskoi molodi v konteksti reformuvannia vitchyznianoi profesiinoi osvity [Transformation of the students' values system in the context of domestic vocational education and training reforming]. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPS Ukrainy. Profesiina pedahohika [Scientific herald of the Institute of vocational education and training of NAES of Ukraine. Professional Pedagogy],* 16, s. 162-168. DOI: http://doi.org/10.32835/2223-5752.2018.16.162-168, [in Ukrainian].

Yershov, M.-O., 2018. Rol ukrainskoi IT-osvity na svitovomu rynku informatsiinykh tovariv i posluh [The role of Ukrainian IT education in the world market of information products and services]. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPS Ukrainy. Profesiina pedahohika [Scientific herald of the Institute of vocational education and training of NAES of Ukraine. Professional Pedagogy],* 16, s. 74-81. DOI: http://doi.org/10.32835/2223-5752.2018.16.74-81, [in Ukrainian].

Zakatnov, D.O., 2007. Orhanizatsiino-pedahohichne zabezpechennia pidhotovky uchnivskoi molodi do planuvannia kariery [Organizational and pedagogical support of training pupils to build a career]. V: *Teoretyko-metodychni problemy vykhovannia ditei ta uchnivskoi molodi: zb. nauk. pr. [Theoretical and methodical problems in character building of children and pupils]*. K.: In-t problem vykhovannia APN Ukrainy, s. 373-380, [in Ukrainian].

Zakatnov, D.O., 2009. Stan i problemy profesiinoi oriientatsii [The conditions and problems of professional orientation]. *Profesiino-tekhnichna osvita: innovatsiinyi dosvid, perspektyvy [Professional (vocational) education: an innovative experience and prospects],* 1(6), s. 173-179, [in Ukrainian].

Zakatnov, D., 2015. Proforiientatsiini zasady kariernoho rozvytku uchnivskoi molodi [Professional orientation and proforientologic competences concerning vocational self-determination and career development of young students]. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPS Ukrainy. Profesiina pedahohika [Scientific herald of the Institute of vocational education and training of NAES of Ukraine. Professional Pedagogy],* 9, s. 86-94, [in Ukrainian].

Zakatnov, D.O., 2017. Derzhavnyi reiestratsiinyi nomer: 0116U003567. *Proektuvannia systemy konsultuvannia z profesiinoi kariery uchniv profesiino-tekhnichnykh navchalnykh zakladiv [Designing a system of career counselling for pupils from professional (vocational) education schools]*. Laboratoriia profesiinoi kariery, IPTO NAPN Ukrainy, perehlianuto 15 Zhovten 2019, [in Ukrainian].

Lemeshko L., 2018. Formuvannia khudozhno-tvorchoi kompetentnosti tekhnikiv-konstruktoriv odiahu yak problema profesiinoi pedahohiky [Forming clothes technicians-constructors' arts– creative competence as a professional pedagogy problem]. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPN Ukrainy. Profesiina pedahohika [Scientific herald of the Institute of vocational education and training of NAES of Ukraine. Professional Pedagogy]*, 16, s. 100-104. https://doi.org/10.32835/2223-5752.2018.16.100-104, [in Ukrainian].

Odnoroh, H., 2018. Teoretychni zasady formuvannia kliuchovykh kompetentnostei uchniv u zakladakh profesiinoi osvity zasobamy interaktyvnykh tekhnolohii [The essence and structure of key competencies of future skilled sewing workers]. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPN Ukrainy. Profesiina pedahohika [Scientific herald of the Institute of vocational education and training of NAES of Ukraine. Professional Pedagogy],* 16, s. 104-108. https://doi.org/10.32835/2223-5752.2018.16.104-108, [in Ukrainian].

Radkevych, O.P., 2012a. Konfidentsiinist personalnoi informatsii u sotsialnykh merezhakh [Privacy of personal information in social networks]. *Visnyk Vyshchoi rady yustytsii [Bulletin of the High Council of Justice]*, 3(11), s. 215-223, [in Ukrainian].

Radkevych, O.P., 2012b. Zabezpechennia okhorony i zakhystu personalnoi informatsii u Spoluchenykh Shtatakh Ameryky ta Velykii Brytanii [Ensuring the safety and protection of personal information in the United States and Great Britain]. *Visnyk Vyshchoi rady yustytsii [Bulletin of the High Council of Justice]*, 1(9), s. 141-153, [in Ukrainian].

Radkevych, V., 2016. Teoretychni ta metodychni zasady rozvytku profesiinoi osvity i navchannia: rezultaty, problemy, perspektyvy [Theoretical and methodological basis of VETdevelopment: results, problems, prospective]. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPN Ukrainy. Profesiina pedahohika [Scientific herald of the Institute of vocational education and training of NAES of Ukraine. Professional Pedagogy]*, 11, s. 5-22, [in Ukrainian].

Seredina, I., 2018. Pidpryiemnytska kompetentnist maibutnikh bakalavriv z ekonomiky pidpryiemnytstva yak naukovo-pedahohichna problema[Entrepreneurial competence of future bachelors in business economics as a scientific and pedagogical problem]. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPN Ukrainy. Profesiina pedahohika[Scientific herald of the Institute of vocational education and training of NAES of Ukraine. Professional Pedagogy],* 16, s. 94-96. https://doi.org/10.32835/2223-5752.2018.16.104-108, [in Ukrainian].

Yablunovska, K., 2018. Teoretychni osnovy formuvannia ekolohichnoi kompetentnosti maibutnikh vykladachiv ahrarnykh zakladiv vyshchoi osvity [Theoretical bases of forming the ecological competence of the agrarian higher education institutions' future academic staff]. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPN Ukrainy. Profesiina pedahohika [Scientific herald of the Institute of vocational education and training of NAES of Ukraine. Professional Pedagogy],* 15, s. 47-53. https://doi.org/10.32835/2223-5752.2018.15.47-53, [in Ukrainian].

Yershov, M.-O., 2019. Digitalisation of professional (vocational) and pre-high tertiary education of Ukraine: problems and prospects. *Scientific herald of the Institute of vocational education and training of NAES of Ukraine. Professional Pedagogy,* 1(18), pp. 67-74. https://doi.org/10.32835/2223-5752.2019.18.67-74, [in English].

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Розвиток підприємницької компетентності майбутніх кваліфікованих фахівців із використанням технології самоменеджменту

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Реферат.

Актуальність: реформування в Україні ринкових відносин детермінує зміни в системи вітчизняної професійної освіти, зокрема необхідність забезпечення підготовки молодих фахівців до успішної особистісної та професійної самореалізації в умовах розвитку малого бізнесу.

Мета: теоретично обґрунтувати доцільність використання технології самоменеджменту в процесі розвитку підприємницької компетентності майбутніх кваліфікованих фахівців в умовах зміни в Україні ринкових відносин та інтенсивного розвитку малого бізнесу.

Методи: зовнішній аналіз відібраних джерел (для визначення історичних обставин і мотивів їх створення та функціонування як елементів певних суспільних відносин), і внутрішній аналіз (вивчення особливостей певного документа).

Результати: показано, що зміна економічних відносин зумовлює активні трансформаційні зрушення в системі цінностей сучасної учнівської молоді; в умовах переходу від суспільства постіндустріального до інформаційного, що характеризується інноваційністю і стрімкою зміною умов праці, доленосного значення для молодих фахівців набуває категорія часу; ключовою навичкою молодого покоління впевнено стає самоменеджмент – раціональне управління часом, розвитком власної особистості і свого життя; міжнародні та вітчизняні документи акцентують увагу на важливості формування кар'єрної, підприємницької та інших ключових компетентностей особистості, необхідних для побудови успішної професійної кар'єри, реалізації самозанятості молодих фахівців в умовах розвитку малого бізнесу; водночас у вітчизняних закладах професійної освіти недосконалою є підготовка молоді до раціонального використання власних особистісних і часових ресурсів.

Висновки: однією з найбільш перспективних для реалізації завдань формування підприємницької компетентності в умовах розвитку малого бізнесу є технологія самоменеджменту; з метою подолання дисбалансу між формуванням професійних та ключових компетентностей, удосконалення психолого-педагогічної та правової підготовки молоді до самозайнятості в умовах зміни ринкових відносин створено програму «Основу інноваційного підприємництва», важливою складовою якої є технологія самоменеджменту; охарактеризовано основні компоненти технології (гностичний, проектувальний, комунікативний, організаційний, конструктивний) та етапи реалізації.

Ключові слова: *професійна освіта, самоменеджмент, ключові компетентності, кар'єрна компетентність, підприємницька компетентність.*

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INSTITUTE OF VOCATIONAL EDUCATION AND TRAINING OF NAES OF UKRAINE

DEVELOPING SAFETY CULTURE OF PROFESSIONAL ACTIVITIES OF FUTURE BUILDERS: THE RESULTS OF THE PEDAGOGICAL EXPERIMENT

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Abstract.

Relevance: the article substantiates the need to develop and experimentally test the effectiveness of the author's methodological system. Theoretical analysis of the problem under study is carried out on the basis of scientific works on the formation of life safety cultures in young people and the development of pedagogical and methodological systems.

Aim: of the article was to experimentally test the developed methodological system of forming a safety culture of professional activity for future builders and to substantiate its future prospects.

Methods: theoretical; empirical (self-evaluation methods; peer evaluation); mathematical and statistical (frequency analysis; criterion test of statistical hypotheses; Spearman's rank correlation coefficient; Statistical Package for the Social Science for the social sciences, Microsoft Excel).

Results: a purposeful, personally-oriented, culturally appropriate and self-organizing methodological system has been developed that provides a continuous process of improving the complex of values and motives, knowledge and skills, as well as the development of professionally important qualities for the prevention and overcoming of dangerous situations and ecological threats literate behaviour, building effective communication in the professional environment during their training in vocational (vocational) educational institutions. The author defines the criteria and the corresponding indicators for assessing the levels of formation of a safety culture of professional activity in future builders.

Conclusions: the results of the experiment confirmed the positive influence of the developed methodological system on the growth of the level of safety culture formation of professional activity in them. In the future, it is envisaged to study and apply the best foreign practices on its formation and development in future specialists, construction workers and teachers, to create an informational educational environment for its formation among vocational education institutions.

Keywords: *professional activity safety culture, future construction workers, methodical system, professional (vocational) education schools.*

Introduction. There is only one possibility to develop the economy and society of the world as a whole – to increase the quality of its main source – human capital. The lack of attention to its development leads to significant losses, limits opportunities for economic growth and management efficiency at all institutional levels. In addition, changes in the techno-economic sphere far outstrip human opportunities for adapting to them (Pyshchulina and others, 2018). Thus, the rapid updating and complication of production technologies leads to limiting the time for employees to launch the industrial safety systems in time. Especially it is crucial for industries with outdated linear models of economic consumption and production, active and purposeful ignorance of introducing the professional safety systems personnel, particularly in construction.

Under following circumstances, the issues of need for forming and developing future professionals on professional activity safety culture is becoming the one f high priority. Thus, the "benchmark point" of VET modernization should be the safety and development of an "individual as the highest value of the state and the most important engine for updating its industrial relations" (Ershova, 2018, pp. 162). Against this background, the experience on vocational education system organization in the countries with highly developed economies is useful as the issue on health keeping plays the key role in providing training for professionals of construction industry (Pukhovskaya, Vornachev and Leu, 2015; Leu, 2018, pp. 5; Kulalaieva and Leu, 2019, pp. 162-163).

Therefore, it is not in doubt to assure forming of professional activiy safety culture for future skilled construction workers (hereinafter referred to as PASC). It should be noted that PASC formation is the most important direction for implementing the strategy of sustainable (balanced) development for society. That assures the life quality improvement for people, namely: rising life safety, health, social and economic security, safe interpersonal communication, environment friendly living, work safety, efficient use of natural resources etc. The implementation of the outlined foresees the development, theoretical substantiation and experimental efficiency verification of methodological system on PASC forming for future skilled construction workers in professional (vocational) education schools (P(V)E schools).

Materials. Theoretical analysis for the studied problem is based on papers on life safety formation for the youth (S. Abramova, V. Akimov, I. Vorobiov, I. Golubieva, L. Horyna, R. Durniev, T. Zyrianova, M. Zorina, A. Kazmina, S. Kosynkina, N. Lyz, V. Moshkin, I. Nemkova, V. Sapronov etc.), in particular in the system of professional education (V. Behun, V. Berezutskyi, M. Vlasova, O. Dronov, O. Zaporozhets, M. Zorina, O. Mykhailov, V. Mykhailiuk, L. Sorokina, O. Sharovatova etc.).

While developing and theoretical substantiation of the author's methodological system, the research on creating pedagogical and methodological systems was taken into account (H. Aleksandrov, N. Ivankova, N. Timoshkina, T. Chshyieva, N. Kuzmina, O. Mykhailov, M. Mykhniuk, A. Kalenskyi, M. Ryzhakov, V. Zhuchkov, O. Ponomariova, T. Smykovska, T. Ivanova, T. Feshchenko etc.). Thus, according to O. Ponomariova, the methodological system is the ordering of the interconnected components set those generally characterize all pedagogical activity components in the given social conditions (Ponomariova, 2013). N. Kuzmina includes the purpose, content, methods and means of training and organizational forms of the educational process to the methodical system. She notes that these components are the same as in the pedagogical system, but "the difference is that each of them has acquired a methodical function" (Kuzmina, 2002). O. Mykhailov, while substantiating the design of the methodological training system for a future life safety teacher, notes that it is capable to functioning only if it defines its goals, training objectives and content via including educational process planning, control, analysis and adjustment (Mykhailov, 2016, pp. 115). The results of the following scientific research testify their based on necessity and expediency for developing the appropriate methodological system.

The aticle aims to present the results of the experimental verification of the developed methodological system for forming the professional activity safety culture for future skilled construction workers and substantiate the future prospects of this system.

Methods. Theoretical (induction, deduction, synthesis and generalization; modeling); empirical (praximetric (study and analysis of pedagogical experience, work plans, training programs for future skilled construction workers and the results of their activities); questionnaire-diagnostic (questioning, conversation, testing, interviewing); self-assessment; expert evaluation (Delphi method, method of commission)); mathematical and statistical (graphoanalytic, method of hierarchy analysis; ranking and scaling; frequency analysis; test of statistical hypotheses (Pearson's criterion ?2); Spearman's rank correlation coefficient; Statistical Package for the Social Sciences for Social Sciences, Excel).

Results and discussion. In the course of the research it is proved that the methodological basis for PASC formation for future skilled construction workers consists of following approaches: system (provides the appropriate methodological system development, promotes forming students' systemic thinking), synergy (considers a student's personality as a system capable for self-organization, and self-realisation), activity (provides efficient activity management via purposeful modeling of conditions and means for its improvement based on synthesis of theoretical knowledge and empirical experience), cultural (allows to create favorable conditions for comprehensive development of youth, provides for formation of a student's personality in socio-cultural significance), anthropological (pays considerable attention to ergonomics and safe working conditions in the workplace), competent (enables professional safety; correctly apply the acquired competencies of commitment to safety in practice), environment-friendly (helps to create an innovative cultural and educational environment in P(V)E schools with

the priority for future professionals' health benefits and lives); personal development (foresees the development of students' potential opportunities and abilities, their professional and personal qualities for future safe professional activity).

Based on this, a purposeful, personally-oriented, culturally appropriate and self-organizing methodical system for PASC formation for future skilled construction workers is developed. That provides a continuous process for improving the complex of values and motives, knowledge and skills, as well as professional important skills development for preventing dangerous situations and threats for construction workers' health and life at workplace, environmentally competent and energy-saving professional behavior, completing efficient communication in professional environment while their studying in P(V)E schools. It structurally and functionally envisages the gradual realization of PASC formation goals via its diagnosis, implementation, evaluation and management. It is built on theoretical grounds based on principles, factors, pedagogical conditions, means and ways of PASC forming as a personality's integrative formation. It is provided by the author's methodology that consists of diagnostic-prognostic, design-organizational, innovation-activity and reflexive-evaluation stages.

The structural components of the author's methodical system include: purpose, content, means of pedagogical communication, teachers, students, diagnostics and control and the following methodological system. The functional components of the proposed system are: design, cognition, procedure, gnostic, reflexity, control and evaluation (Kulalaieva, 2018, pp. 139). This methodological system is provided at two levels: content and activity. That implies gradual PASC formation for future constructors based on content mastering, appropriate forms applicating, methods, interactive technologies, as well as the developed author's methodology, and use of the developed educational-methodical complex. It includes the program and the author's course "The professional activity safety culture for construction workers"; calendar-thematic planning of lessons; educational and methodical manual "The professional activity safety culture for construction workers"; trainings for teachers; distance courses for pedagogical workers, "The professional activity safety culture for construction workers", "Energy-efficient competence for pedagogical workers of P(V)E schools of construction profile"); "Safety Culture" web-site, guidelines "Forming the professional activity safety culture for future skilled construction workers"; self-control tests; means of control (tests for ongoing and final control of students' academic achievement, questions for students' self-control); the list of recommended literature and the Internet resources for studying the course; glossary (dictionary of terms); educational information visualization tools (multimedia presentations, videos, reference charts, etc.).

We emphasize that PASC formation for future skilled construction workers is reflected in their conscious professional behavior in compliance with them. It is formed via their acquisition of theoretical and practical knowledge in PASC field, aquiryng the PASC based professional skills, developing the professionally important qualities those are important for the mastering and value-based attitude to PASC (Kulalaieva, 2018, pp. 22).

The PASC formation level assessment of future skilled construction workers was carried out according to the developed criteria and their corresponding indicators: value-motivational (value-based attitude to professional and personal safety; positive attitude to own health keeping while professional activity; need in eco-smart professional behavior; motivation to energy-saving professional behavior; desire for constructive professional communication), innovative-cognitive (theoretical knowledge on methods and means of preventing hazardous situations in the construction site; knowledge of ensuring the health of workers at the construction site; understanding of environmental threats from pollution and harmful substances generated in the construction industry; knowledge of energy-efficiency in construction; rules and basics based on awareness of construction workers' communicative interaction), behavioral-active (ability to plan own strategy of safe behavior; skills for preventing occupational injuries and illnesses for construction workers; skills and environmentally conscious professional behavior; possession of energy efficient technologies, methods and means of energy saving in construction; professional communication skills at the construction site), and evaluation-reflexive (professionally important qualities, important for: own strategy of safe professional behavior; prevention of professional injuries and diseases for builders; ensuring environmentally conscious professional behavior; ensuring professional efficiency; activity). There are three levels of its formation: the first level – low (consumer), the second – medium (reproductive), the third – high (productive). The transition from low to high levels of professional safety culture is provided via purposeful measures based on changes made at previous levels.

Pedagogical experiment was carried out on the basis of P(V)E schools (Kamianka professional lyceum, Vasylkiv professional lyceum, Voznesensk professional lyceum, Snegurov professional lyceum, Mykolaiiv professional lyceum, Odesa Center for

VET, Odessa professional lyceum for building architecture and construction, Chernivtsi professional lyceum for construction, Kyiv Regional high VET school for construction, Romny High VET school).

While the parallel experiment, the experimental and control groups were formed (number of students in control groups was 396; number of students in experimental groups was 382). The students of control groups were trained based on traditional approaches and students of experimental groups – had changed training conditions based on introducing the author's methodical system for future skilled construction workers' PASC formation.

The diagram shows comparative results on diagnosing PASC levels formation for future skilled workers of construction profile at control and experimental groups (at ascertaining and forming stages of experiment) *(Drawing 1-2)*.

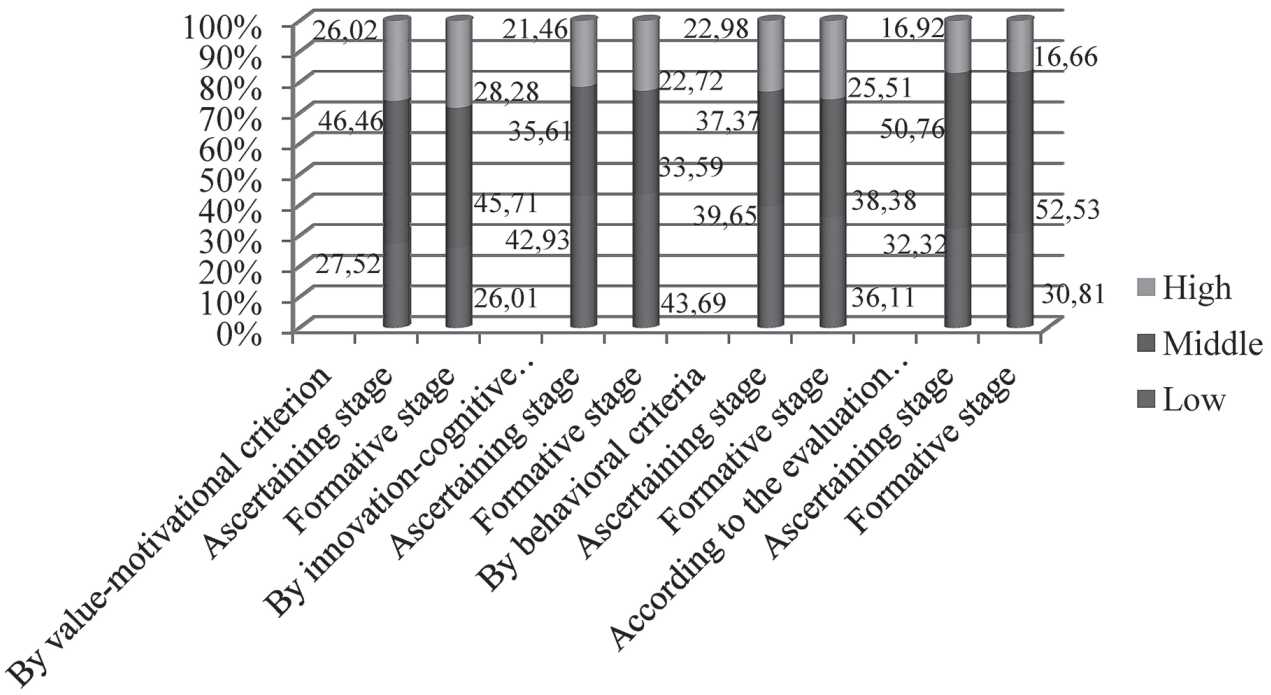
At the experimental stage of experiment, the differences between indicators of control and experimental groups were not statistically significant at the level $\alpha = 0.05$ by all criteria, namely: value-motivational ($\chi^2 = 0.39$); innovative-cognitive ($\chi^2 = 0,270$), behavioral-activity ($\chi^2 = 0,072$); evaluative-reflexive ($\chi^2 = 0,33$). Such results attest the uniform quality of selection.

The analysis results on PASC levels formation of future skilled workers of construction profile of control and experimental groups by all criteria at the formative stage showed more significant positive changes for the students of experimental groups. Differences between control and experimental groups were statistically significant at the level $\alpha = 0.05$ by all criteria: value-motivational ($\chi^2 = 12,613$); innovative-cognitive ($\chi^2 = 11,974$); behavioral activity ($\chi^2 = 14,747$); evaluative-reflexive ($\chi^2 = 12,449$). The given data make it possible to confirm the positive influence of developed and scientifically grounded methodological system on raising PASC level formation of future skilled workers of construction profile.

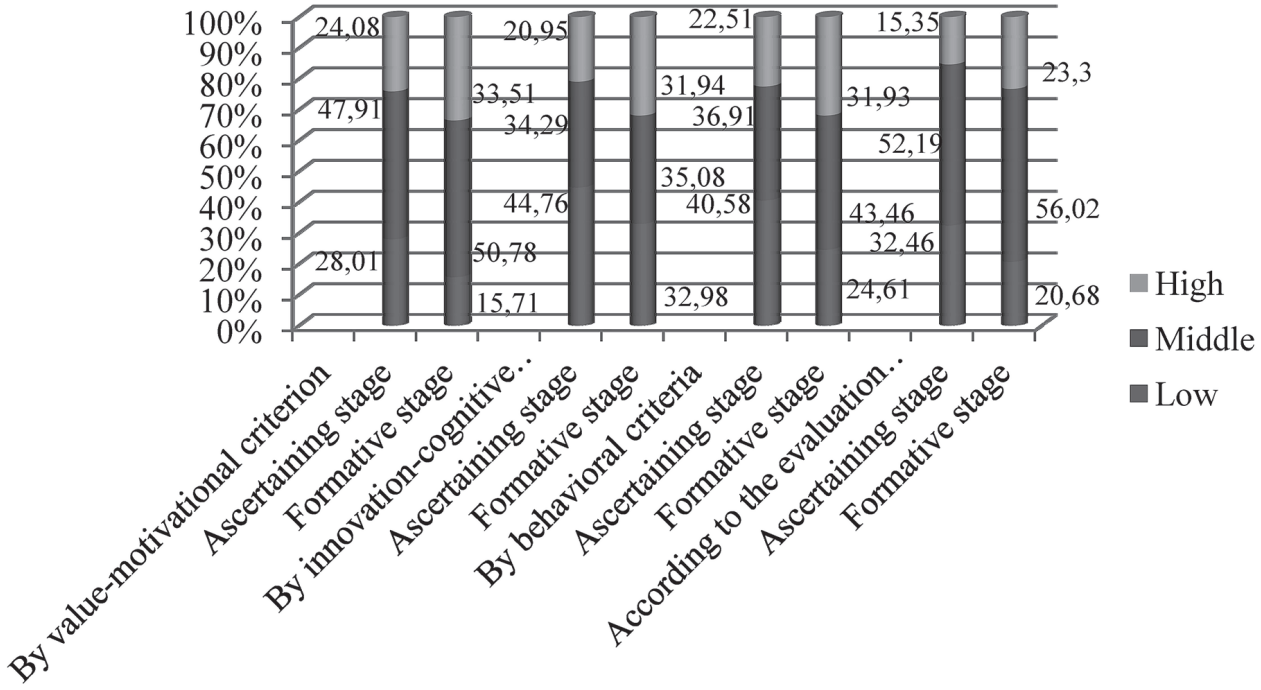
In addition, the expert efficiency evaluation for developed curriculum of the author's course and training manual "Professional activity safety culture for construction workers" by three groups of experts (scientists, methodologists of Training-methodological centers of VET and pedagogical staff of VET schools). The calculated values of Spearman's rank correlation coefficients confirmed the consistency of experts' opinions.

In the future, it is planned to develop methodological bases for PASC development of construction enterprises personnel and pedagogical staff of P(V)E schools for construction profile, study and use of best foreign practices for future professionals' PASC formation and development, creating educational information environment for PASC formation P(V)E network.

Conclusions. The efficiency of developed methodological system for professional activity safety culture



Drawing 1. Comparative results on diagnosing PASC formation levels for future skilled workers of cinstruction profile (%) at control groups (at ascertaining and forming stages of experiment)



Drawing 2. Comparative results of PASC diagnostic levels for future skilled workers of construction profile (%) at experimental groups (at ascertaining and forming stages of experiment)

of skilled construction workers, that is purposeful, person-oriented, culture responsive and capable to self-organization, consists of structural units and functional components. It provides at content and activity levels the step-by-step PASC formation of future construction workers based on mastering the content, using appropriate forms, methods, interactive technologies, as well as developed author's methods and training-methodological complex. The study prospects include the development of methodological bases for PASC development of construction industry enterprises personnel and pedagogical employees of P(V)E schools for construction profile, study and use of best foreign practices for future specialists' PASC formation and development, creation of educational information environment for PASC formation in the network of domestic P(V)E schools.

List of references

Єршова Л., 2018. Трансформація системи цінностей учнівської і студентської молоді в контексті реформування вітчизняної професійної освіти. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка,* 16, с. 162-168. DOI: http://doi.org/10.32835/2223-5752.2018.16.162-168.

Кузьмина, Н. В., 2002. Понятие «педагогической системы» и критерии её оценки. В: Н. В. Кузьмина, ред. *Методы системного педагогического исследования.* Москва: Народное образование, с. 7-52.

Кулалаєва, Н. В., 2018. Концепція формування культури безпеки професійної діяльності в майбутніх кваліфікованих робітників будівельного профілю. *Проблеми інженерно-педагогічної освіти,* 59, с. 18-27. DOI: https://doi.org/10.32820/2074-8922-2018-59-18-27.

Кулалаєва, Н., 2018. Методична система формування культури безпеки професійної діяльності в майбутніх кваліфікованих робітників будівельного профілю. *Науковий вісник Ужгородського університету. Серія: «Педагогіка. Соціальна робота»*, 2 (43), с. 138-141. DOI: https://doi.org/10.24144/2524-0609.2018.43.138-141.

Леу, С. О., 2018. *Особливості стандартизації в системі професійної освіти і навчання Великої Британії:* методичні рекомендації. Київ: Компринт.

Михайлов, А. А., 2016. Модель методической системы подготовки будущих учителей безопасности жизнедеятельности. *Ученые записки университета имени П. Ф. Лесгафта,* [online] 6 (136), с. 114-125. Доступно: <https://cyberleninka.ru/article/n/model-metodicheskoy-sistemy-podgotovki-buduschih-uchiteley-bezopasnosti-zhiznedeyatelnosti> [Дата звернення 26 Липень 2019].

Пономарёва, О. Н., 2013. Методические подходы к преподаванию курса «Окружающая среда и здоровье человека». *Известия высших учебных заведений. Поволжский регион. Гуманитарные науки*, 3 (27), с. 170-175.

Пищуліна, О., Юрочко, Т., Міщенко, М. та Жаліло, Я., 2018. *Розвиток людського капіталу: на шляху до якісних реформ,* 2018. Київ: Видавництво «Заповіт»; Центр Разумкова. [online] Доступно: http://razumkov.org.ua/uploads/article/2018_LUD_KAPITAL.pdf [Дата звернення 20 Липень 2019].

Пуховська, Л. П., Ворначев, А. О. та Леу, С. О., 2015. *Професійний розвиток персоналу підприємств у країнах Європейського Союзу.* К.: ІПТО НАПН України.

Kulalaieva, N. та Leu, S., 2019. Work-based learning involving the dual education elements. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка,* 18, с. 162-168. DOI: https://doi.org/10.32835/2223-5752.2019.18.

Translated & Transliterated

Yershova L., 2018. Transformatsiia systemy tsinnostei uchnivskoi i studentskoi molodi v konteksti reformuvannia vitchyznianoi profesiinoi osvity [Transformation of the students' values system in the context of domestic vocational education and training reforming]. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPN Ukrainy. Profesiina pedahohika [Scientific Herald of the Institute of Vocational Education and Training of NAES of Ukraine. Vocational pedagogy],* 16, s. 162-168. DOI: http://doi.org/10.32835/2223-5752.2018.16.162-168, [in Ukrainian].

Kuzmyna N. V., 2002. Poniatye «pedahohycheskoi systemyi» y kryteryy eyo otsenky [The concept of «pedagogical system» and the criteria for its assessment]. *Metodyi systemnoho pedahohycheskoho yssledovanyia [Methods of systematic pedagogical research]* / pod. red. N. V. Kuzmynoi. Moskva: Narodnoe obrazovanye, 2002. s. 7-52, [in Russian].

Kulalaieva, N. V., 2018. Kontseptsiia formuvannia kultury bezpeky profesiinoi diialnosti v maibutnikh kvalifikovanykh robitnykiv budivelnoho profiliu [Concept of safety culture forming for professional activity of future qualified workers of building profile]. *Problemy inzhenerno-pedahohichnoi osvity [Problems of engineering and pedagogical education],* 59, s. 18?27. DOI: https://doi.org/10.32820/2074-8922-2018-59-18-27, [in Ukrainian].

Kulalaieva, N., 2018. Metodychna systema formuvannia kultury bezpeky profesiinoi diialnosti v maibutnikh kvalifikovanykh robitnykiv budivelnoho profiliu [Methodical system of professional activity safety culture formation for future qualified workers of construction profile]. *Naukovyi visnyk Uzhhorodskoho universytetu. Seriia: «Pedahohika. Sotsialna robota» [Uzhgorod University Scientific Bulletin. Series: «Pedagogy. Social work»],* 2 (43), s. 138–141. DOI: https://doi.org/10.24144/2524-0609.2018.43.138-141, [in Ukrainian].

Leu, S. O., 2018. *Osoblyvosti standartyzatsii v systemi profesiinoi osvity i navchannia Velykoi Brytanii: metodychni rekomendatsii [Specific nature of standardization in the system pf vocational educationand training in Great Britain]* Kyiv: Komprynt, [in Ukrainian].

Mykhailov, A. A., 2016. Model metodycheskoi systemyi podhotovky budushchykh uchytelei bezopasnosty zhyznedeiatelnosty [Model of a methodological system for training future teachers on life safety issues]. *Uchenye zapysky unyversyteta ymeny P. F. Leshafta [Scientific notes of the university named after P.F. Lesgaft],* 6 (136), s. 114-125. [online]. Dostupno: <https://cyberleninka.ru/article/n/model-metodicheskoy-sistemy-podgotovki-buduschih-uchiteley-bezopasnosti-zhiznedeyatelnosti> [Data zvernennia 26 Lypen 2019], [in Russian].

Ponomaryova, O. N., 2013. Metodycheskye podkhodyi k prepodavanyiu kursa «Okruzhaiushchaia sreda y zdorove cheloveka» [Methodological approaches to teaching the course «Environment and Human Health»]. *Yzvestyia vyisshykh uchebnyikh zavedenyi. Povolzhskyi rehyon. Humanytarnyie nauky [News of higher educational institutions. Volga region. Humanitarian sciences],* 3 (27), s. 170-175, [in Russian].

Pyshchulina, O., Yurochko T., Mishchenko, M. ta Zhalilo, Ya., 2018. *Rozvytok liudskoho kapitalu: na shliakhu do yakisnykh reform, 2018. Kyiv: Vydavnytstvo «Zapovit»; Tsentr Razumkova.* [online] Dostupno: http://razumkov.org.ua/uploads/article/2018_LUD_KAPITAL.pdf [Data zvernennia 20 Lypen 2019], [in Ukrainian].

Pukhovska, L. P., Vornachev, A. O. ta Leu, S. O, 2015. *Profesiinyi rozvytok personalu pidpryiemstv u krainakh Yevropeiskoho Soiuzu [Professional development of personnel at enterprises in the European Union countries]*. K.: IPTO NAPN Ukrainy, [in Ukrainian].

Kulalaieva, N., Leu S., 2019. Work-based learning involving the dual education elements. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPN Ukrainy. Profesiina pedahohika [Scientific Herald of the Institute of Vocational Education and Training of NAES of Ukraine. Vocational pedagogy],* 18, s. 162-168. DOI: https://doi.org/10.32835/2223-5752.2019.18.162-168, [in English].

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Формування культури безпеки професійної діяльності майбутніх будівельників: підсумки педагогічного експерименту

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Реферат.

Актуальність: необхідність розроблення та експериментальної перевірки результативності авторської методичної системи визначається завданнями збалансованого розвитку світової економіки і суспільства, зокрема потребою в підвищенні якості людського капіталу.

Мета: експериментальна перевірка розробленої методичної системи формування культури безпеки професійної діяльності в майбутніх будівельників та обґрунтування його подальших перспектив.

Методи: теоретичні; емпіричні (методи самооцінювання; експертного оцінювання); математичні та статистичні (частотний аналіз; критерій перевірки статистичних гіпотез; коефіцієнт рангової кореляції Спірмена; статистичний пакет SPSS (Statistical Package for the Social Science) для соціальних наук, програма Microsoft Excel).

Результати: розроблено цілеспрямовану, особистісно орієнтовану, культуровідповідну та здатну до самоорганізації методичну систему, що забезпечує безперервний процес удосконалення комплексу цінностей і мотивів, знань і вмінь, а також розвиток професійно важливих якостей щодо попередження та подолання небезпечних ситуацій і загроз здоров'ю та життю будівельників, екологічно грамотної поведінки, побудови ефективної комунікації у професійному середовищі під час їхньої підготовки в закладах професійної (професійно-технічної) освіти; визначено критерії та відповідні їм показники для оцінювання рівнів сформованості культури безпеки професійної діяльності у майбутніх будівельників.

Висновки: експериментально доведено, що відмінності контрольних та експериментальних груп є статистично значущими на рівні $\alpha = 0{,}05$ за всіма критеріями: ціннісно-мотиваційним ($\chi^2=12{,}613$), інноваційно-когнітивним ($\chi^2=11{,}974$), поведінково-діяльнісним ($\chi^2=14{,}747$), оцінно-рефлексивним ($\chi^2=12{,}449$), що доводить результативність розробленої методичної системи формування культури безпеки професійної діяльності в майбутніх кваліфікованих робітників будівельного профілю.

Ключові слова: *культура безпеки професійної діяльності, майбутні будівельники, методична система, заклади професійної (професійно-технічної) освіти.*

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AN EXPERIMENTAL VERIFICATION OF EFFICIENCY OF PEDAGOGICAL CONDITIONS FOR DEVELOPING TECHNOLOGICAL CULTURE OF VOCATIONAL TRAINING TEACHERS IN AGRÎINDUSTRY

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Abstract.

Relevance: the problem of technological culture development for industrial training masters of agrarian profile is determined by the need to modernize the professional (vocational) education and innovative changes in the agrarian sector.

Materials: in papers of local and foreign researchers (V. Radkevych, H. Romanova, L. Komisarova, V. Kovalchuk, M. Mykhniuk, N. Alova, V. Kuznetsov, R. Khoteieva and others) the issue on developing technological culture for industrial training masters of agrarian profile at regional training-methodological centres for vocational education and training (SMC for VET) is studied not enough.

Aim: to analyse the results of experimental testing the efficiency of offered pedagogical conditions for technological culture development for industrial training masters of agrarian profile in SMC for VET.

Methods: general scientific (analysis, synthesis, modelling, systematization and generalisation), diagnostic, pedagogical experiment, statistics.

Results and discussions. The ascertaining stage results of the experiment testified the lack of technological culture development for industrial training masters of agrarian profile in control and experimental groups. It is defined that after introducing pedagogical conditions while forming stage in the experimental group there are positive changes on rising the level of technological culture for industrial training masters of agrarian profile compared to the results of the ascertaining one. The share of teachers with sufficient and high level has risen from 57,1% up to 79,2%. In the same time, in the control group the industrial training masters demonstrated much more lesser dynamics of technological culture development. The share of respondents with high and sufficient level has risen only for 3,7%. The statistic difference of shared divide for industrial training masters of agrarian profile in experimental and control groups has been proved in the end of the experiment.

Conclusions: it is defined that the effect of changes in experimental group is reasoned by introducing the pedagogical conditions appropriate to the developed model and methodology.

Key words: *technological culture, technological culture development levels and components, industrial training masters of agrarian profile, experimental testing of pedagogical conditions efficiency.*

Introduction. The problem of developing technological culture for industrial education masters of agrarian profile is getting especially crucial under innovative transformations in the field of professional (vocational) education (Radkevych, 2018) and the equipment and technologies rapid development in modern agriculture industry (Diomin, 2018). In this regard, there is the need in modernising regional methodological service of vocational education and training (VET) that meets the present demands and forms the information-educational environment for developing the technological culture of a modern

teacher of a professional (vocational) education institution (hereinafter: P(V)E institution).

In this context, the activity of regional training-methodical (scientific-methodical) centres (offices) for VET (hereinafter: SMC for VET) should be aimed at solving the following problems:

– creating conditions for self-realization and self-improvement, development of professional and personal qualities of teachers;

– providing adaptive methodological support for implementing by teachers the individual educational paths of technological culture development;

– creating conditions for developing and implementing modern educational technologies in the educational process;

– forming modern information and educational environment for continuous professional development of teachers;

– identification and disseminating best pedagogical practices for training future agrarian specialists,

– accumulating materials of creative teachers' innovative experience.

Materials. The theoretical analysis results of domestic and foreign scientists' scientific researches indicate the multi-vector nature of the study on the problem of improving P(V)E institutions teachers' technological culture. In particular, various aspects of the problem are disclosed in the papers by V. Radkevych (2010), H. Romanova (2014), L. Komissarov (2012), V. Kovalchuk (2014), M. Mikhniuk (2016), N. Alova (2013), V. Kuznetsova (1999), R. Khotieieva (2005). However, despite the significant scientific interest in the identified problems, the issues on technological culture development for industrial education masters of agrarian profile at regional SMC for VETs require research and scientific understanding.

The article aims to analyse the experimental verification results on efficiency of the proposed pedagogical conditions for developing technological culture for industrial education masters of agrarian profile in a SMC for VET.

Methods: analysis and synthesis – to clarify the development state and level for the studied problem and substantiating the conceptual-categorial apparatus; modelling – to detail the author's vision of developing technological culture for industrial education masters of agrarian profile in a SMC for VET, systematization and generalization – to formulate conclusions and recommendations on developing technological culture for industrial education masters of agrarian profile; diagnostic – to study the state-of-arts technological culture development for industrial education masters of agrarian profile; pedagogical experiment – to obtain the data on implementation efficiency of pedagogical conditions on technological culture development for industrial education masters of agrarian profile according to the developed author's methodology; statistical – to check the reliability of indicators differences for levels of technological culture development of industrial education masters of agrarian profile in the control and experimental groups.

The research hypothesis is based on the assumption that the development of technological culture for industrial education masters of agrarian profile will be more efficient under following conditions: increasing teachers' motivation to improve technological culture; updating further education content in the region; using blended learning technologies in the system of further education in the region; introducing adaptive methodological support for teachers' internship courses.

The technological culture in the conditions of professional (vocational) education modernisation is extremely important both in the aspect of pedagogical system designing and the state-of-arts of modern high-tech agrarian production. Under these conditions, the activity of an industrial training master of agrarian profile should be carried out through the use of professionally oriented teaching technologies based on a combination of socially and personally significant, pragmatic and spiritual values (Romanova, 2009).

The essence of the concept of "technological culture for industrial education masters of agrarian profile" is characterized as an integral professional and personal formation that covers a set of interconnected personal and professional qualities and competencies necessary for successful implementation of professional and pedagogical activities based on goal-setting, use of pedagogical, information-communication and production technology in accordance with the conceptual provisions of sustainable development for the society, economy and environment (Shamraliuk, 2019, pp. 11).

According to the analysis results of local and foreign scientists' papers and taking into account the specifics of activities for an industrial education masters of agrarian profile under modern socioeconomic conditions, it is proved that the technological culture for the teachers of this category is ensured by the unity of following components: motivational, axiological, cognitive, active, reflective. The selected components reflect the necessary professional and pedagogical level of industrial education masters of agrarian profile to perform functional duties by introducing innovative educational technologies taking into account modern trends in developing agrarian production and the latest technologies for growing crops.

Outlining the level of every component development is carried out by the criterion of the same name and its indicators. To clear up the criteria and indicators performance degree based on generalization

of actual data, four levels of technological culture development for teachers of the following category are identified: low, medium, sufficient and high.

At the same time, new regulatory environment, innovative educational technologies and pedagogical creativity developments determine objective changes in planning and organizing the regional methodological service to improve technological culture for industrial education masters of agrarian profile. In this context, the experimental study aims to verify the introducing efficiency of pedagogical conditions for developing the technological culture for industrial education masters of agrarian profile in the practice of SMCs for VET.

The generalised results for the ascertaining stage of the experiment indicate that the level of technological culture development for industrial education masters of agrarian profile in the control and experimental groups is not enough *(Table 1)*.

Note that the obtained results on the level of technological culture development for industrial education masters of agrarian profile in the control and experimental groups do not differ statistically significantly (χ^2emp. = 0.058, which is less than χ^2theor. = 7.815) with a 95% probability.

The results of the ascertaining stage of the study allow us to conclude that the real state of technological culture development for industrial education masters of agrarian profile does not fully meet modern socio-economic challenges, and therefore there is a need to ensure the pedagogical conditions of this process, and is provided for by the logic of the study.

During the forming stage, in the control group for advanced training of industrial education masters of agrarian profile, the regional SMC for VET worked in a usual manner and the experimental group implemented pedagogical conditions aimed at active developing of technological culture for industrial education masters of agrarian profile in accordance with the developed models (Shamraliuk, 2018b) and methodologies (Shamraliuk, 2018a). The proposed methodology implies the step-by-step implementation for following stages: motivational, practical and analytical. At each step the interaction between educational process subjects occurs both in full-time and in remote mode.

In particular, at motivation stage, the professional field of industrial education masters of agrarian profile is determined and updated and the search for ways to improve his/her technological culture (internal and external) is encouraged through the use of methods such as problem situations modelling, case studies, benchmarking, discussion, communication and beliefs, delegation of authority, Buddying. Main interaction forms for SMC for VET methodologists and VET masters at this stage are counselling, conducting trainings, master-classes, round-table meetings, teachers' participation in competitive events, regional, national and international educational and industry exhibitions.

Training for industrial education masters of agrarian profile at practical stage is aimed at building and implementing individual educational paths, improving technological culture and is carried out differentially according to the rotation model of blended learning (for teachers with low and medium levels of technological culture) and the flex model (for teachers with sufficient and high levels of technological culture). That provides the variability of training content, forms and methods.

With the rotational model, the day-time and distance learning cycles are sequentially combined. And the organization of educational process in accordance with flex-model involves more on-line training. It is complemented by eye consultations, group projects, and the work of creative groups. While practical stage for both models, teachers master the author's special course "Fundamentals of technological culture for industrial education masters of agrarian profile". Also, they actively participate in the work of the regional professional section, and get the adaptive methodological support for internship in the workplace.

To ensure the efficiency for teachers training, it is advisable to use productive technologies, in particular: design, training, case technologies, technology of scientific and methodological support and pedagogical coaching. The improvement of technological culture for teachers is facilitated by the preparation of educational and methodological complex that includes a special course program, an electronic resource "Fundamentals of Technological Culture", and a methodological manual "Technological culture for industrial education masters of agrarian profile".

For successful application in practice of SMC for VET the technology of blended learning, an information educational environment for the advanced

Table 1

Technological culture development levels for industrial education masters of agrarian profile (ascertaining stage)

Group	**Level, %**				χ^2
	low	**medium**	**sufficient**	**high**	
control	12,5	31,4	38,1	18,0	0,058
experimental	11,6	31,3	39,4	17,7	

training of VET teachers has been created, including online resources with limited and open access.

At analytical stage the analysis is made for conformity self-assessment and external evaluation of educational process in SMC for VET to improve the technological culture for industrial education masters of agrarian profile, correction chosen by teachers on professional paths and building a plan for further career growth. The main organizational forms at this stage are practical exercises, round-table meetings, experience exchange conferences, trainings, consultations with use of technologies for mutual recognition and self-presentation of teachers' educational results.

Thus, the author's methodology for developing the technological culture for industrial education masters of agrarian profile at SMC for VET is aimed at teachers' personal self-development, creating conditions for self-realization and self-determination, establishing the subject-subject relations for SMC for VET methodologist and VET masters.

Let us analyse the development dynamics of individual components of technological culture for industrial education masters of agrarian profile in the control and experimental groups based on the results of the ascertaining and formative stages of the experiment.

The frequency indicators of distribution for industrial education masters of agrarian profile by the levels of technological culture components development convincingly testify the disagreement between representatives of the two groups. In particular, for the motivational component in the experimental group, we observe a significant decrease in the number of production masters with low (-13.7%) and medium (-10.1%) levels, amid an increase in the share of teachers with a sufficient (+14.3) and high (+ 9.5%) levels of technological culture. Accordingly, the control group recorded a decrease in the indicator at a low level (-9.6%) with a simultaneous slight increase in the average (+ 4.2%), sufficient (+ 3.0%) and high (+ 1.8%) levels of development motivational component of technological culture.

Compared with the ascertaining experiment results, the number of respondents in the experimental group with a high level of development of the axiological component increased by 19.1%, while the number of teachers with a low, medium, and sufficient level decreased by 3.0%, 6.0%, and 10 1, respectively % According to the control group, the differences in indicators are insignificant: a decrease in the proportion of teachers with low (-3.6%) and sufficient (-4.8%) levels and an increase with the average (+ 5.3%) and high (3, 1%) levels.

The teachers of experimental group showed rapid positive dynamics in the development of technological culture cognitive component: the number of industrial education masters of agrarian profile with low (-12.5%) and medium (-21.4%) levels, while increasing the proportion of teachers with sufficient (+ 16.1%) and high (+ 17.8%) levels. But in the control group, the indicator for the low level of development of the cognitive component decreased by 7.1% and the indicators for the average, sufficient and high levels increased by 2.3%, 1.8% and 3.0%, respectively.

The representatives of the experimental group on the technological culture activity component experienced the following dynamics of its development levels: the proportion of teachers who reached a sufficient (+ 15.5%) and high (+ 10.1%) levels increased, while the share of teachers with an average level (– 20.8%). The industrial education masters in the control group showed a slight increase in the average (+ 2.4%), sufficient (+ 3.0%) and high (+ 1.8%) levels of the activity component while reducing the share of teachers by 7.2% low level.

By the reflective component of technological culture in the experimental group, we observe an increase in the proportion of respondents with high and sufficient levels by 11.9% and 6.0%, respectively. At the same time, the share of industrial education masters with low (-11.3%) and medium (-6.6%) levels decreased. The teachers of the control group on the reflective component showed a decrease of 9% at a low level, an increase of 3.6% and 5.4%, respectively, at an average and sufficient levels. However, the high level of change did not happen.

The comparative analysis results of the ascertaining and formative stages show that in the experimental group there were significant positive changes to increase the development levels of technological culture for industrial education masters of agrarian profile. After introducing pedagogical conditions in the activities of SMC for VET, the percentage of high-level teachers increased by 13.7%, a sufficient level – from 39.4% to 47.8%, the share of vocational training masters with low and medium levels decreased by 9.1%, respectively and 13.0%. But for the industrial education masters in the control group, the changes are less significant.

In general, in the experimental group, after the introduction of pedagogical conditions, the majority of industrial education masters of agrarian profile (79.2%) achieved a sufficient and high level of technological culture *(Table 2)*, 22.1% more compared with the results of the stating experiment. In the control group, this indicator increased from 56.1% at the beginning of the experiment to 59.8% after the formative stage. That is, the established system of work of the regional methodological service does not fully ensure the development of technological culture for industrial education masters of agrarian profile at a high and sufficient level.

Table 2

Technological culture development levels for industrial education masters of agrarian profile (formative stage)

Group	Level, %				χ^2
	low	medium	sufficient	high	
control	5,2	35,0	39,8	20,0	9,438
experimental	2,5	18,3	47,8	31,4	

Validation of obtained results is carried out by Pearson's criterion, which according to the results of the calculations is 9,438. It is higher than its theoretical value (7,815). That is, the empirical distributions of industrial education masters of the experimental and control groups by technological culture development levels are statistically different at the end of the experiment. This testifies the successful influence of pedagogical conditions on improvement of technological culture cognitive component: the number of industrial education masters of agrarian profile and the expediency of their introduction into the system of work of the regional methodological service.

Conclusions. The statistical processing and qualitative characterisation of experiment results convincingly testify to the significant increase in the levels of technological culture cognitive component: the number of industrial education masters of agrarian profile in the experimental group in comparison with the control one.

The positive dynamics of the phenomenon under this study is caused by introducing in practice of the SMC for VET the following pedagogical conditions in accordance with the developed models and methods: increasing teachers' motivation to improve technological culture; updating further education content in the region; using blended learning technologies in the system of further education in the region; introducing adaptive methodological support for teachers' internship courses.

List of references

Алова, Н. Н., 2013. *Педагогическая культура преподавателя лицея как феномен профессиональной деятельности.* Кандидат наук. Ивановский государственный университет.

Дьомін, О., 2018. Формування професійної компетентності майбутніх бакалаврів із агроінженерії в умовах модернізації вітчизняного сільського господарства. Н*ауковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка,* 16, с. 109-115.

Ковальчук, В.І., 2014. *Теоретичні і методичні засади розвитку педагогічної майстерності майстрів виробничого навчання професійно-технічних начальних закладів у післядипломній освіті.* Доктор наук. Класичний приватний університет (Запоріжжя).

Комісарова, Л.О., 2012. *Розвиток технологічної культури майстрів виробничого навчання професійно-технічних навчальних закладів швейного профілю.* Кандидат наук. Інститут професійно-технічної освіти НАПН України.

Кузнецов, В.В., 1999. *Развитие педагогической культуры мастеров производственного обучения*. Кандидат наук. Уральский государственный профессионально-педагогический университет.

Михнюк, М.І., 2016. *Теоретичні і методичні основи розвитку професійної культури викладачів спеціальних дисциплін будівельного профілю.* Доктор наук. Інститут професійно-технічної освіти НАПН України.

Радкевич, В.О., 2010. *Теоретичні і методичні засади професійного навчання у закладах профтехосвіти художнього профілю*. Київ: УкрІНТЕІ.

Радкевич, В., 2018. Науково-методичний супровід модернізації вітчизняної системи професійної та фахової передвищої освіти у контексті євроінтеграційних процесів. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка,* 15, с. 5-15.

Романова, Г.М., 2014. Проектування технологій професійного навчання майбутніх кваліфікованих робітників. *Професійно-технічна освіта: науково-методичний журнал НАПН України*, 62, с. 47-64.

Романова, Г.М., 2009. Психолого-педагогічна підготовка як чинник професійної самореалізації викладачів економічного університету. *Вісник Львівського університету,* 3(25), с. 167-175

Хотеева, Р. И., 2005. *Психологический аспект формирования технологической культуры будущих специалистов инженерно-педагогического профиля.* Кандидат наук. Калужский государственный педагогический университет им. К.Э. Циолковского.

Шамралюк, О.Л., 2018 а. Методика розвитку технологічної культури майстрів виробничого навчання аграрного профілю в умовах регіональної методичної служби. *Проблеми інженерно-педагогічної освіти,* 59, с. 88-94.

Шамралюк, О.Л., 2018 b. Модель розвитку технологічної культури майстрів виробничого навчання аграрного профілю. *Вісник Глухівського національного педагогічного університету імені Олександра Довженка. Педагогічні науки,* 2 (37) / 1, с. 81-88.

Шамралюк, О.Л., 2019. *Технологічна культура майстра виробничого навчання аграрного профілю.* Хмельницький: ФОП Мельник А. А.

Translated & Transliterated

Alova, N. N., 2013. *Pedagogicheskaya kultura prepodavatelya litseya kak fenomen professionalnoy deyatelnosti [Pedagogical culture of a teacher as a phenomena of professional activity].* Kandidat nauk. Ivanovskiy gosudarstvennyiy universitet, [in Russian].

Domin, O., 2018. Formuvannia profesiinoi kompetentnosti maibutnikh bakalavriv iz ahroinzhenerii v umovakh modernizatsii vitchyznianoho silskoho hospodarstva [Forming the professional competence for future bachelours on agro-engineering in modernisation conditions for local agriculture sector]. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPS Ukrainy. Profesiina pedahohika [Scientific herald of the Institute of vocational education and training of NAES Ukraine. Professional Pedagogy],* 16, s. 109-115. DOI: http://doi.org/10.32835/2223-5752.2018.16.109-115, [in Ukrainian].

Kovalchuk, V.I., 2014. *Teoretychni i metodychni zasady rozvytku pedahohichnoi maisternosti maistriv vyrobnychoho navchannia profesiino-tekhnichnykh nachalnykh zakladiv u pisliadyplomnii osviti [Theoretical and methodological basis for pedagogical excellence development of industrial training masters of vocational education and training schools while their post-graduate education].* Doktor nauk. Klasychnyi pryvatnyi universytet (Zaporizhzhia), [in Ukrainian].

Komisarova, L.O., 2012. *Rozvytok tekhnolohichnoi kultury maistriv vyrobnychoho navchannia profesiino-tekhnichnykh navchalnykh zakladiv shveinoho profiliu [Technological culture development for industrial training masters of vocational education and training schools of sewing profile].* Kandydat nauk. Instytut profesiino-tekhnichnoi osvity NAPN Ukrainy, [in Ukrainian].

Kuznetsov, V.V., 1999. *Razvitie pedagogicheskoy kulturyi masterov proizvodstvennogo obucheniya [Pedagogical culture development for industrial training masters].* Kandidat nauk. Uralskiy gosudarstvennyiy professionalno-pedagogicheskiy universitet, [in Russian].

Mykhniuk, M.I., 2016. *Teoretychni i metodychni osnovy rozvytku profesiinoi kultury vykladachiv spetsialnykh dystsyplin budivelnoho profiliu [Theoretical and methodological basis of professional culture development for teachers of special subjects of building profile].* Doktor nauk. Instytut profesiino-tekhnichnoi osvity NAPN Ukrainy, [in Ukrainian].

Radkevych, V.O., 2010. *Teoretychni i metodychni zasady profesiinoho navchannia u zakladakh proftekhosvity khudozhnoho profiliu [Theoretical and methodological basis for professional training in VET schools of Arts profile].* Kyiv: UkrINTEI, [in Ukrainian].

Radkevych, V., 2018. Naukovo-metodychnyi suprovid modernizatsii vitchyznianoi systemy profesiinoi ta fakhovoi peredvyshchoi osvity u konteksti yevrointehratsiinykh protsesiv [Scientific-methodological support for modernisation local VET and pre-tertiary occupational education system in the context of Euro-integration process]. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPS Ukrainy. Profesiina pedahohika [Scientific herald of the Institute of vocational education and training of the National Academy of Pedagogical Sciences of Ukraine. Professional Pedagogy],* 15, s. 5-15, [in Ukrainian].

Romanova, H.M., 2014. Proektuvannia tekhnolohii profesiinoho navchannia maibutnikh kvalifikovanykh robitnykiv [Projecting the technology for professional training of future qualified workers]. *Profesiino-tekhnichna osvita: naukovo-metodychnyi zhurnal NAPN Ukrainy [Vocational education: scientific and methodological journal of the National Academy of Pedagogical Sciences of Ukraine],* 62, s. 47-64, [in Ukrainian].

Romanova, H.M., 2009. Psykholoho-pedahohichna pidhotovka yak chynnyk profesiinoi samorealizatsii vykladachiv ekonomichnoho universytetu [Psychology-pedagogical training as an indicator of professional self-realisation for teachers of a university for economics]. *Visnyk Lvivskoho universytetu [Visnyk of the Lviv university. Series Pedagogics],* 3(25), s. 167-175, [in Ukrainian]

Hoteieva, R. I., 2005. *Psihologicheskiy aspekt formirovaniya tehnologicheskoy kulturyi buduschih spetsialistov inzhenerno-pedagogicheskogo profilya [Psychological aspect of forming the technological culture for future specialists of engineering-pedagogical profile].* Kandidat nauk. Kaluzhskiy gosudarstvennyiy pedagogicheskiy universitet im. K.E. Tsiolkovskogo, [in Russian].

Shamraliuk, O.L., 2018 a. Metodyka rozvytku tekhnolohichnoi kultury maistriv vyrobnychoho navchannia ahrarnoho profiliu v umovakh rehionalnoi metodychnoi sluzhby [Methodology for developing technological culture of industrial training masters of agrarian profile in regional methodical services conditions]. *Problemy inzhenerno-pedahohichnoi osvity [Problems of engineering pedagogic],* 59, s. 88-94, [in Ukrainian].

Shamraliuk, O.L., 2018 b. Model rozvytku tekhnolohichnoi kultury maistriv vyrobnychoho navchannia ahrarnoho profiliu [Technological culture development model for industrial training masters of agrarian profile]. *Visnyk Hlukhivskoho natsionalnoho pedahohichnoho universytetu imeni Oleksandra Dovzhenka. Pedahohichni nauky [Oleksandr Dovzhenko Glukhiv National Pedagogical University Bulletin. Series: Pedagogical Sciences]*, 2 (37) / 1, s. 81-88, [in Ukrainian]..

Shamraliuk, O.L., 2019. *Tekhnolohichna kultura maistra vyrobnychoho navchannia ahrarnoho profiliu [Technological culture of a n industrial training master of agrarian profile].* Khmelnytskyi: FOP Melnyk A. A., [in Ukrainian].

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Експериментальна перевірка ефективності педагогічних умов розвитку технологічної культури майстрів виробничого навчання аграрного профілю

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Реферат.

Актуальність: проблема розвитку технологічної культури майстрів виробничого навчання аграрного профілю детермінована необхідністю модернізації професійної (професійно-технічної) освіти та інноваційними перетвореннями в аграрній галузі.

Мета: проаналізувати результати експериментальної перевірки ефективності запропонованих педагогічних умов розвитку технологічної культури майстрів виробничого навчання аграрного профілю в НМЦ ПТО.

Методи: загальнонаукові (аналіз, синтез, моделювання, систематизація й узагальнення), діагностичні, педагогічний експеримент, статистичні.

Результати. Підсумки констатувального етапу експерименту засвідчили, що рівень розвиненості технологічної культури майстрів виробничого навчання контрольної та експериментальної груп є недостатнім. З'ясовано, що в результаті запровадження педагогічних умов під час формувального етапу в експериментальній групі відбулися значні позитивні зміни щодо підвищення рівня технологічної культури майстрів виробничого навчання в порівняні із результатами констатувального етапу. Частка педагогів із достатнім і високим рівнем технологічної культури зросла з 57,1% до 79,2%. Водночас, у контрольній групі майстри виробничого навчання продемонстрували значно нижчу динаміку розвиненості технологічної культури. Питома вага респондентів із високим і достатнім рівнем зросла лише на 3,7%. Доведено статистичну відмінність частотних розподілів майстрів виробничого навчання аграрного профілю у експериментальній та контрольній групах наприкінці експерименту.

Висновки: встановлено, що ефект змін в експериментальній групі зумовлений запровадженням педагогічних умов відповідно до розроблених моделі і методики.

Ключові слова: *технологічна культура, компоненти і рівні розвиненості технологічної культури, майстер виробничого навчання аграрного профілю, експериментальна перевірка ефективності педагогічних умов.*

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IMPLEMENTATION OF RESULT-BASED MANAGEMENT IN THE PROCESS OF OPERATION OF VET INSTITUTIONS

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Abstract.

Relevance of the topic: the need to improve the efficiency of the management of vocational (vocational-technical) education institutions, the introduction of innovative approaches to management in order to ensure the sustainable development of the institution in the conditions of increasing competition in the educational services market.

Objective: to analyze the results of implementation of the conception of results-based management in the process of operation of VET institutions (on the example of Donetsk and Luhansk regions) and to develop recommendations for the effective implementation of such an approach.

Methods: theoretical analysis, synthesis, induction, extrapolation, questioning, self-evaluation, statistical processing of results obtained.

Results: it is found that current political, economic, socio-demographic factors significantly limit the development of VET sphere in Donetsk and Luhansk regions, which exacerbates the need to find new impulses for such development. It is determined that the priorities for interventions should, among other things, be the development of managerial capacity of the managers (principals) of VET institutions. It has been found out that results-based management should be an appropriate concept of effective management of VET institutions. Theoretical analysis of the essence of the concept of "result-oriented management" was carried out, its essential features were clarified. The specifics of the program of development of managerial competence of principals of VET institutions and the results of its implementation in Donetsk and Lugansk regions are presented. It is proved that the principles of systematic, value orientation, contextuality, self-development, multifunctionality, continuity, diversification, integration, efficiency should be taken into account in the process of development of the relevant program. It is determined that the program should include the stages of full-time training (modular training), intersession post-training support of participants, independent work (creating strategies for the development of VET institutions), evaluation (using the model the evaluation of the performance of the head of the institution by different stakeholders). Experts' survey results are presented on: relevance of the proposed management tools to the specifics of management activity of the VET institutions' managers, importance of these tools in terms of effective implementation of result-based management, readiness for implementation of this concept in management activities, existing experience of using these tools. The problems connected with the implementation of results-based management concept in the process of management of VET institutions were revealed. Recommendations for overcoming of these problems are suggested.

Conclusions. There is an urgent need to increase the managerial capacity of heads of VET institutions; it is advisable to implement a program of such development using blended learning technology; conceptual basis for content design should be result-based management; the content of the program must meet the criteria of practical orientation and adaptability. In order to avoid problems of low motivation to further utilization of competences acquired during training, it is advisable to maintain further interaction with the heads of institutions who have demonstrated high personal motivation during the training period.

Keywords: *result-based management, VET institution, managerial competence, principal of VET institution, blended-learning, readiness to implementation of innovations.*

Introduction. The current period of development of vocational (vocational-technical) education in Ukraine is characterized by the implementation of some new approaches concerning: decentralization of management and improvement of the mechanism of financing the system of vocational (vocational-technical) education at the state and regional levels; increase of efficiency of functioning of regional councils of vocational (vocational-technical) education; network optimization and creation of new types of institutions, ensuring their autonomy; formation of content of vocational (vocational-technical) education on a competent basis and introduction of system of internal and external quality assurance of vocational education; modernization of the educational environment; formation of a system of professional qualifications, introduction of mechanisms to stimulate employers to participate in the educational process in VET schools; implementation of a dual form of vocational education; increasing attractiveness of vocational (vocational-technical) education. The general internal political vector of decentralization of management, including in the sphere of vocational (vocational-technical) education, necessitates the decomposition of strategic priorities and their adaptation to regional specificity. Unique features of the development of the research area in Donetsk and Lugansk regions give rise to the need for scientific reflection and practically oriented activities in the direction of its modernization, increasing the efficiency and orientation to the needs of the local labor market (National Strategy for the Development of Education in Ukraine until 2021, 2013; Sustainable Development Strategy "Ukraine – 2020", 2015; Modern Vocational Education: Draft Conceptual Framework for the Reform of Vocational Education in Ukraine, 2019).

Materials. During the last decade, various aspects of the management of educational institutions have been considered in the works of Ukrainian scientists, in particular: the general theory of management of educational institutions at different levels was developed by E. Berezniak, V. Bondar, L. Danylenko, G. Dmytrenko, G. Yelnikova, Y. Konarzhevsky, V. Lazarev, V. Maslov, N. Ostroverkhova, M. Potashnik, M. Suntsov, G. Fedorov, E. Khrykov and others; aspects of design of educational institution development became the subject of scientific research by O. Dakhin, V. Maslov, V. Monakhov, V. Pikelna, etc .; key issues of strategic management of higher education institutions were studies in the works of V.Vozniuk, B.Gershunsky, G. Dmytrenko, T. Zhornyak, L. Karamushka, K. Kolesnikova, V. Kolpakova, O. Marmazy, V. Maslov, V. Melnik, M. Navrotskaya, N. Ostroverkhova, O. Pometun, M. Potashnik, O. Rodionov, P.Tretyakov, L.Shchogolieva; aspects of project management were disclosed in the works of S. Aleynikov, S. Boushuev, M. Grinyov, L. Nozdrin, E. Matvishin, V. Morozov, L. Ponomarenko, O. Polotay, F. Freich, V. Yashchuk, etc.; aspects of management of vocational (vocational-technical) education institutions were presented in the works of N. Nychkalo, V. Radkevych, V. Svystun, L. Petrenko. Considerable attention to the research of problems of innovative management of vocational education institutions have been given in the work of foreign researchers, in particular D. Adams, D. Gamash, A. Aidli, M. Vladi, M. Barber, V. Varen, N. Burt, D. Collinson, D. Hogler, K. Holmes. However, despite existing developments, the problem of implementation of innovative approaches to the management of vocational (vocational-technical) education institutions (in particular, result-based management) has not yet been the subject of special analysis.

Thus, the purpose of this article is to analyse the results of implementation of results-based management in the process of operation of VET institutions (on example of Donetsk and Lugansk regions) and to develop recommendations for the effective implementation of this management approach.

Results and discussion. The development of the sphere of vocational (vocational-technical) education in Donetsk and Lugansk oblasts has its peculiarities, due, first of all, to the specificity of a number of factors. According to research (Baranovsky, 2019; Melnyk, 2019), they are: significant loss of resource (including economic, demographic, human, intellectual) potential caused by aggression by the Russian Federation; low rates of population birth and reproduction (which results in a significant reduction in the number of students in vocational institutions and increased competition with higher education institutions); dominance of such economic activities as agriculture, production of agricultural products, construction and reconstruction of buildings and infrastructure, coal industry, development of renewable energy, mechanical engineering and metallurgy, services; negative trends in the labour market (constant increase in outflow of labour migration, growth of the informal segment of the economy, mono-sectorial specialization of the majority of settlements, grow of phenomena of motivation for abstinence, increase in the share of persons with partial employment, high level of motivation of young people to study in other regions of the country and abroad). Therefore, at the regional level, the sphere of vocational education faces a number of challenges, including the need to organize the institution in the conditions of low attractiveness of vocational education and the need to respond promptly to the rapidly changing environment (first of all, economic environment). In such circumstances, it is important

to increase the level of knowledge and managerial capacity of the principals of VET institutions, which will improve the competitiveness of institutions in the regional educational market, ensure the quality of educational services, and increase the demand for skilled workers in the regional labour market.

These prerequisites have identified the need to develop a program for the development of managerial competence of principals of VET institutions in Donetsk and Lugansk oblasts. The peculiarities of such a program are that the development of managerial competence of the specified category of participants was carried out in several stages using blended learning concept: full-time training (module 1), post-training support, full-time training (module 2), development and presentation by participants strategies for VET institutions, the process of comprehensive evaluation of strategies. The purpose of the training was to acquire practical skills in using the tools of operational and strategic management of VET institutions. The objectives of the training were: to familiarize the participants with the effective tools of operational, marketing and strategic management of VET institutions; acquiring participants with sustainable skills to use effective tools of operational, marketing and strategic management of the institution; to familiarize participants with modern methods of communication and motivation of the staff of the VET institution; increase of personal efficiency of participants in professional activity; encouraging the effective implementation of philosophy and culture of result-based management; motivating participants to actively apply their skills in a professional context by creating suggestions to improve the operational and strategic management of VET institutions and to use the tools learned during the training.

The conceptual basis for design of the content of management competency development was the concept of results-based management. The results of the analysis of the content of the concept of "results-based management" (Arif, Jubar and Ahsan, 2015; UNDP, 2000; UN, 2017; UN Development Team, 2011; UNICEF, 2017) make it possible to distinguish its essential features: assurance (is a management strategy which contributes to the guaranteed achievement of planned results); the complexity of the impact (recognizing the significant impact (direct or indirect) of business processes and employees involved in achieving results); objectivity (the need to make decisions based on objective information (which is based on a situational analysis) and formed a vision of the necessary changes and improvements; involves identifying the desired state, developing ways to achieve it, constant monitoring of progress towards achievement of goals, analysis of intermediate information and its correction, making the following decisions solely on the basis of analysis of previously obtained information); cyclicality (is a cyclical technology that includes the process of goal setting, planning, measurement of results and performance indicators, systematic monitoring of goals achievement, analysis and evaluation of results as a basis for future decisions); measurability (is a process of strategic planning and management based on the results of environmental research and the development of measuring instruments to achieve the objectives); management by objectives (includes cascading organizational goals to the individual level, evaluating the performance of goals in different order, constant feedback to improve the results). In addition, according to the concept of developers, the content of training should meet the criteria of practical orientation (clearly meet the specifics of the sphere of vocational education and have high potential for effective application in the process of management of VET institutions) and adaptability (presenting the processes of operational and strategic management in the form of technology which included the use of effective tools and a clear algorithm for performing management functions). In accordance with the concept of result-based management, a program for the development of managerial competence of principals of VET institutions was developed *(Table 1)*.

The following forms and methods were used for the realization of the training tasks: mini-lectures, discussions, business simulations, moderation, "critical friend" method, individual work, supervision, work in pairs, mentoring, creation of individual projects, homework, provocative dialogues. The work was organized interactively, enabling the training participants to acquire the skills to use specific tools for operational and strategic management of VET institutions. In order to consolidate the acquired knowledge and skills and increase the motivation of the training participants to apply them in a professional context, post-training support was carried out in the intersessional stage (in the form of distance counselling of participants). The purpose of the intersessional stage was to implement the acquired skills to the process of operation of VET institutions and generate strategic initiatives for institution development. At the same time, it was assumed that the participants will use the tools used during the training. The number of trainees was 52 (total number of principals of VET institutions in the studied region – 67).

The majority of participants appreciated the results of the training and their own effectiveness in it. The appreciation also concerned the tools that were studied during the program. According to the participants, the proposed approach and technology of result-based management will in the future enable: to determine the

Table 1

Program for development of managerial competence of principals of VET institutions

№	The name of the module	The name of the topic
1.	Module 1. Operational management of the VET institution	– principles and methodology of result-based management; – concept and structure of the management cycle; – goal setting in managing the VET institution; – key performance indicators (KPIs); – effective planning tools; – effective task prioritization tools; – tools for analysing staff performance; – concepts and principles of delegation of responsibility in the management of the VET institution; – methods of improving the effectiveness of communication and motivation with employees.
2.	Module 2. Strategic management of the VET institution	– concepts and outcomes of strategic management of the VET institution; – algorithm of strategic management; – methods of analysis of the external environment of the VET institution; – methods of analysis of competitive advantages in strategic planning of the VET institution; – methods of goal setting in strategic management; – design of a road map of the institution's activities in strategic management; – methods of strategic analysis; – methods of generating strategic initiatives for the development of the VET institution's development strategy.

specific goals of VET institutions, to achieve a clear correspondence of the goal and the result; to clearly monitor and measure the outcome and analysis of the dynamics of change, determine the roadmap of the institution and performance management tools; to define specific goals, results, determine the time and resources to achieve them; to ensure speed of achievement of result; to involve the majority of employees in making the best decision; to make the institution more manageable, since strategic plans make it possible to compare the achieved results with the set goals, specified in the form of planned goals and performance indicators.

Within the intersessional stage, a survey of the participants of the training was conducted, in order to identify expert opinion on: the relevance of the proposed management tools to the specifics of the management activities of the principals of VET institutions, the importance of these tools in terms of effective implementation of result-based management, trainees' readiness for implementation of this concept, existing experience in using these tools. A 10-point scale was used in the survey; the results were differentiated by the criterion of importance as follows: 0-3 points – low level, 4-7 – medium level, 8-10 – high level. According to the results of the survey, experts differently assess the importance of certain management tools *(Fig. 1)*: the highest rated tools were SMART, metaprogram profile (more than 50% of respondents consider these tools as highly important). Instead, a significant number of respondents rated the Pareto Principle, the Mind mapping, the Eisenhower Matrix and the ABC Analysis as less conducive to the implementation of the result-based management concept. Significant is also the differentiation of experts' opinions by the following tools: metaprogram profile, key performance indicators and working day snapshot.

The distribution of respondents according to the criterion of readiness for implementation of result-based management concept *(Fig. 2)* indicates a slight predominance of participants with an average level of such readiness; the proportion of those who rate their readiness as high (36.4%) is quite high. A positive marker is that none of the participants indicated a low willingness to implement this approach. Such a result may be linked, on the one hand, to the objective state of affairs and, on the other, to the socially expected responses given by the respondents.

Monitoring of current experience (including prior experience, training experience, and intersession experience) using result-based management tools indicates a predominance among respondents who are either planning to use them soon or who already have effective experience. Also significant is the proportion of individuals who either have a negative or discreet experience in using them.

For our research is also important the opinion of the experts (trainees) regarding the possible limitations and problems associated with implementing the

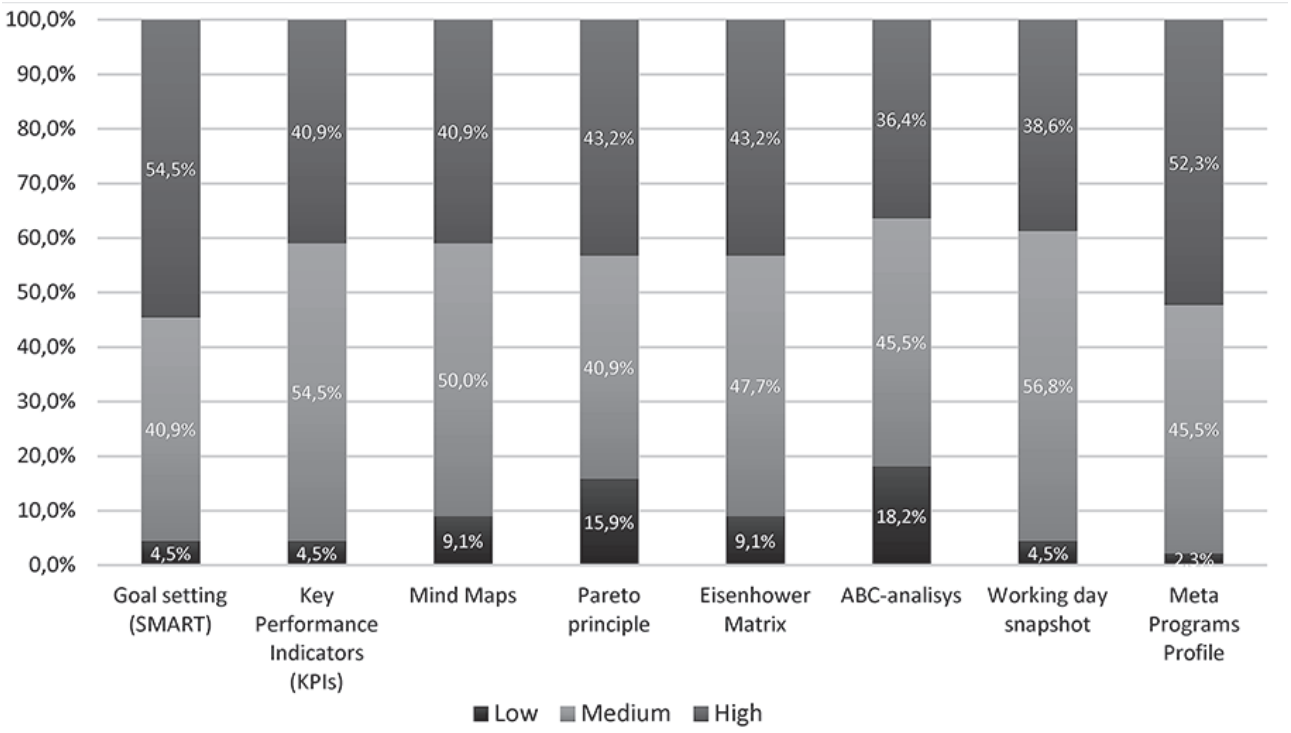

Fig. 1. Responents` assessment of management tools according with the criteria of their importance

defined management approach: lack of clear algorithms for achieving the goal; possibility of errors in actions in the process of work; inability to adjust the work before the end of the process; lack of ability to use certain tools to implement the result-based management system; focusing of risk management on operational rather than strategic aspects, reactive rather than proactive responding to risks; lack of motivation of the principal and staff for the implementation of result-based management concept; a large number of tools that a manager need to know and use at work, the duration of the process; limitation of resources to ensure systematic implementation of all tasks and activities envisaged by the strategy; non-fulfilment or partial realization of the set goals as a result of factors that do not depend on the institution; inability to anticipate all circumstances and risks at the planning stage; the determining influence of the external environment to the functioning of the institution; negative attitude of the team to the implementation of result-based management concept, their unpreparedness, lack of communication and, as a consequence, misunderstanding of management actions; lack of

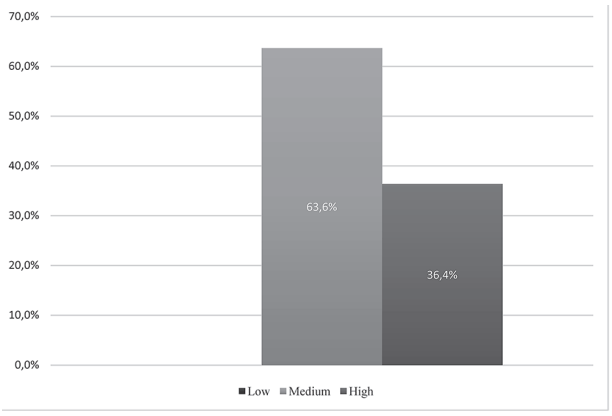

Fig. 2. Self-assessment of respondents' level of readiness for implementation of result-based management concept

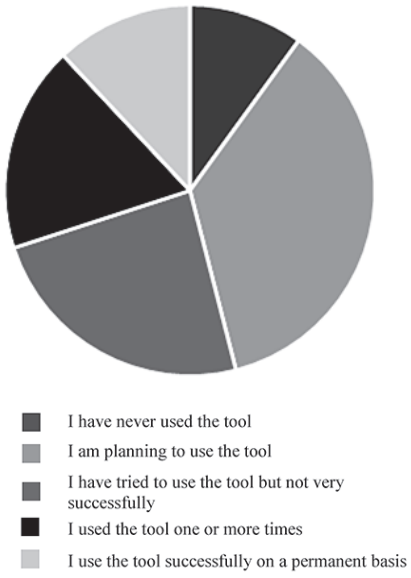

Fig. 3. Current experience in using result-based management tools

concretization, possible blur of details and stages on the way to a certain result; complexity of taking into account unplanned issues; disorganization of employees, concentration only on the achievement of one goal, lack of independence; spending time on developing of plans and monitoring rather than working with students; misunderstanding of this methodology by employees; the need for continuous evaluation of progress towards the goal, as opposed to the process of accomplishing the tasks; the probability of deviations, mistakes in the process of reaching the goal; rejection of the new, confidence in the effectiveness of the previous management system; staffing risks (lack of staff qualifications, staff turnover, resistance to changes by staff etc.).

The results of the analysis make it possible to distinguish the following recommendations regarding the implementation of result-based management in the process of operation of VET institutions:

1. In order to enhance the managerial capacity of the principals of VET institutions, it is advisable to develop and implement a comprehensive program for the development of their managerial competence that integrates innovative approaches to the management of institutions (in particular, result-based management).

2. Developing such a program, the following principles must be taken into account: systematicity (ensuring the systemic character of pedagogical influence on trainees); value orientation (development of values and attitudes relevant to the specifics of principals' professional activity); contextuality (taking into account the peculiarities of the context of activity in the process of development of managerial competence); self-development (considering the subjects of training as self-developing ones); multifunctionality (integration of functions of development of managerial competence and ensuring purposeful implementation of the acquired knowledge and skills in professional activity); continuity (cultivating culture and values of continuous professional development); diversification (use of various forms and methods of development of managerial competence); integration (use of non-formal and informal learning technologies); efficiency (ensuring the guarantee of pedagogical impact).

3. The content of the training should meet the criteria of practical orientation (clearly meet the specifics of the sphere of vocational education and have a high potential for effective application in the process of managing of institutions) and adaptability (presenting the processes of operational and strategic management in the form of technologies that involve the use of effective tools and a clear algorithm for performing control functions).

4. In the process of implementation of the program of development of managerial competence, it is advisable to distinguish the stages of full-time study, intersession post-training support of participants, independent work, complex assessment of the quality of task performance (which will allow to acquire the cognitive basis of skills, to ensure the development of appropriate skills, to deepen the ability to use skills in working context, develop appropriate strategies for the development of VET institutions, taking into account their specific context).

5. It is advisable to form training groups in accordance with the criterion of homogeneity (by age, management experience, institution profile, etc.), which will influence the group dynamics and interest in mastering the program.

6. In order to increase the management capacity of VET institutions and the implementation of result-based management, it is also advisable to: maintain further close interaction with those trainees who have demonstrated high personal motivation during the training period; initiating a competition for the best manager of the VET institution (evaluation criteria may be those used in the process of assessment of developed strategies); further methodological support of participants (in particular creation of manuals that reveal modern tools of effective implementation of defined business processes – cooperation with stakeholders, personnel management, marketing activities, etc.); encouraging participants to use modern technologies (in particular, ICT) in the management and educational process (using the experience of European countries, where appropriate mobile applications are used for similar purposes, enabling effective operational and strategic management).

Conclusions. The conducted research makes it possible to draw the following conclusions: decentralization of management in the field of vocational (vocational-technical) education necessitates the decomposition of strategic priorities and their adaptation to regional specificity; existing political, economic, socio-demographic factors significantly limit the development of VET sphere in Donetsk and Lugansk regions; there is an urgent need to increase the managerial capacity of the principals of VET institutions, which can be realized through the development of their managerial competence; the program of such development is advisable to implement using the technology of blended learning, which involves the stages of full-time training (training on a modular basis), intersessional post-training support of participants, independent work (creating strategies for the development of VET institutions), evaluation (which models the process of evaluation of principals' performance by different stakeholders); conceptual basis for content design should be result-based management, which has meet the criteria of practical orientation and adaptability; the principles of systematicity,

value orientation, contextuality, self-development, multifunctionality, continuity, diversification, integration, efficiency should be taken into account in the development of the relevant program. In order to avoid problems of low motivation to further use the competences acquired during training, it is advisable to maintain further close interaction with trainees who have demonstrated high personal motivation during the training period.

List of references

Барановський, М., 2019. *Комплексний аналіз системи професійно-технічної освіти Донецької області.* [online] Програма ООН з відновлення та розбудови миру. Доступно: <https://www.undp.org/content/dam/ukraine/docs/Donbas/RPP/comprehensive%20analysis%20of%20vocational%20traiing%20in%20donetsk%20oblast_UKR.pdf > [Дата звернення 10 Вересень 2019].

Бородієнко, О., 2019. *Методичні матеріали для учасників тренінгу «Ефективне управління закладами професійної (професійно-технічної) освіти».* [online] Програма ООН з відновлення та розбудови миру. Доступно: <https://www.ua.undp.org/content/ukraine/uk/home/library/recovery-and-peacebuilding/vocational-education-institutions-management.html> [Дата звернення 10 Вересень 2019].

Бородієнко, О.В., 2015. Критерії, показники, рівні сформованості професійної компетентності керівників структурних підрозділів підприємств сфери зв'язку. *Молодь і ринок,* 7 (150), с. 109-115.

Бородієнко, О.В., Пуховська, Л.П., Радкевич В.О., Радкевич О.П., Леу С.О., Артемчук В.В., Базелюк Н.В. та Корчинська Н.М. 2018. *Сучасні моделі професійної освіти і навчання в країнах Європейського Союзу: порівняльний досвід.* Київ: Інститут професійно-технічної освіти НАПН України.

Верховна Рада України. Законодавство України, 2013. *Про Національну стратегію розвитку освіти в Україні на період до 2021 року:* Указ Президента України від 25.06.2013 № 344/2013. [online] (Останнє оновлення 06 Липень 2013) Доступно: <http://zakon3.rada.gov.ua/laws/show/344/2013>. [Дата звернення 15 Вересень 2019].

Верховна Рада України. Законодавство України, 2015. *Про Стратегію сталого розвитку «Україна-2020»:* Указ Президента України від 12.01.2015 № 5/2015. [online] (Останнє оновлення 12 Січень 2015) Доступно: <http://zakon3.rada.gov.ua/laws/show/5/2015>. [Дата звернення 15 Вересень 2019].

Міністерство освіти і науки України, 2019. *Сучасна професійна освіта: проект концептуальних засад реформування професійної освіти України.* [online] (Останнє оновлення 16 Травень 2019) Доступно: <https://mon.gov.ua/ua/news/mon-rozrobilo-proekt-konceptualnih-zasad-reformuvannya-profesijnoyi-osviti-ukrayini-suchasna-profesijna-osvita> [Дата звернення 15 Вересень 2019].

Мельник, С., 2019. *Комплексний аналіз системи професійно-технічної освіти Луганської області.* [online] Програма ООН з відновлення та розбудови миру. Доступно: <https://www.undp.org/content/dam/ukraine/docs/Donbas/RPP/analysis%20of%20the%20vocational%20education%20and%20training%20system%20in% 20luhansk%20oblast_UKR.pdf> [Дата звернення 10 Вересень 2019].

Радкевич, О.П., 2012a. Конфіденційність персональної інформації у соціальних мережах. *Вісник Вищої ради юстиції,* 3(11), с. 215-223.

Радкевич, О.П., 2012b. Забезпечення охорони і захисту персональної інформації у Сполучених Штатах Америки та Великій Британії. *Вісник Вищої ради юстиції*, 1(9), с. 141-153.

Радкевич, О.П., 2017. Професійний розвиток викладачів і тренерів закладів професійної освіти в країнах Європейського Союзу. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка,* 13, с. 130-139.

Maliha, A., Muhammad, J. and Ali, A., 2015. Use of Result Based Management (RBM) Framework for Monitoring Projects of Public Sector in Pakistan – A Case Study, *International Journal of Innovation, Management and Technology,* [online] vol. 6, n. 2. Available at: <https://www.researchgate.net/publication/318470915_Use_of_Result_Based_Management_RBM_Framework_for_Monitoring_Projects_of_Public_Sector_in_Pakistan_-_A_Case_Study> [Accessed 10 September 2019].

Results Based Management Concepts and Methodology 2000. [online] UNDP Results Framework. Technical Note. Available at: <http://web.undp.org/evaluation/documents/RBMConceptsMethodgyjuly2002.pdf> [Accessed 10 September 2019].

Results-based management handbook. Applying RBM concepts and tools for a better urban future 2017. [online] UN-Habitat Results-Based Management Handbook. Available at: <https://urbangateway.org/system/files/documents/urbangateway/un-habitat_rbm_handbook_complete_0.pdf> [Accessed 10 September 2019].

Results-based Management Handbook. Harmonizing RBM concepts and approaches for improved development results at country level 2011. [online] United Nations Development Group. Available at: <https://www.academia.edu/29138271/RESULTS-BASED_MANAGEMENT_HANDBOOK_Harmonizing_RBM_concepts_ and_approaches_for_improved_development_results_at_country_level> [Accessed 10 September 2019].

Results-Based Management Handbook: Working together for Children 2017. [online] United Nations Children's Fund (UNICEF). Available at: <https://www.pndajk.gov.pk/uploadfiles/downloads/RBM_Handbook_Working_Together_for_Children_July_2017.pdf> [Accessed 10 September 2019].

Translated & Transliterated

Baranovskyj, M., 2019. *Kompleksnyj analiz systemy profesijno-texnichnoyi osvity Doneczkoyi oblasti* [Comprehensive analysis of the system of vocational education in Donetsk region]. [online] UNDP. Available at: <https://www.undp.org/content/dam/ukraine/docs/Donbas/RPP/comprehensive%20analysis%20of% 20vocational%20traiing%20in%20donetsk%20oblast_UKR.pdf > [Accessed 10 September 2019], [in Ukrainian].

Borodiyenko, O., 2015. Kryteriyi, pokaznyky, rivni sformovanosti profesijnoyi kompetentnosti kerivnykiv strukturnyx pidrozdiliv pidpryyemstv sfery zvyazku [Criteria, indicators, levels of professional competence of heads` of structural divisions of telecommunication enterprises]. *Youth and the Market*, 7 (150), pp. 109-115, [in Ukrainian].

Borodiyenko, O., 2019. *Metodychni materialy dlya uchasnykiv treningu «Efektyvne upravlinnya zakladamy profesijnoyi (profesijno-texnichnoyi) osvity». [Methodological materials for the participants of the training «Effective management of vocational (vocational) education institutions»]*. [online] UNDP. Available at: <https://www.ua.undp.org/content/ukraine/uk/home/library/recovery-and-peacebuilding/vocational-education-institutions-management.html> [Accessed 10 September 2019], [in Ukrainian].

Borodiyenko, O.V., Pukhovska, L.P., Radkevych V.O., Radkevych O.P., Leu S.O., Artemchuk V.V., Bazeliuk N.V. ta Korchynska N.M., 2018. *Suchasni modeli profesiinoi osvity i navchannia v krainakh Yevropeiskoho Soiuzu: porivnialnyi dosvid [Current models of vocational education and training in the countries of the European Union: comparative experience]*. Kyiv: Instytut profesiino-tekhnichnoi osvity NAPN Ukrainy, [in Ukrainian].

Maliha, A., Muhammad, J. and Ali, A., 2015. Use of Result Based Management (RBM) Framework for Monitoring Projects of Public Sector in Pakistan – A Case Study, *International Journal of Innovation, Management and Technology,* [online] vol. 6, n. 2. Available at: <https://www.researchgate.net/publication/318470915_Use_of_Result_Based_Management_RBM_Framework_for_Monitoring_Projects_of_Public_Sector_in_Pakistan_-_A_Case_Study> [Accessed 10 September 2019], [in Trello, 2019. [online] Available at: <https://trello.com> [Accessed 16 September 2019], [in Ukrainian].

Verkhovna Rada Ukrainy. Zakonodavstvo Ukrainy [Verkhovna Rada of Ukraine. Legislation of Ukraine], 2013. *Pro Nacionalnu strategiyu rozvytku osvity v Ukrayini na period do 2021 roku: Ukaz Prezydenta Ukrayiny vid 25.06.2013 № 344/2013* [On the National Strategy for the Development of Education in Ukraine for the Period until 2021: Presidential Decree of June 25, 2013 No. 344/2013] [online] (Ostannie onovlennia 06 Lypen 2013) Dostupno: <http://zakon3.rada.gov.ua/laws/show/344/2013> [Data zvernennia 15 Veresen 2019], [in Ukrainian].

Verkhovna Rada Ukrainy. Zakonodavstvo Ukrainy [Verkhovna Rada of Ukraine. Legislation of Ukraine], 2015. *Pro Strategiyu stalogo rozvytku «Ukrayina-2020»: Ukaz Prezydenta Ukrayiny vid 12.01.2015 № 5/2015* [On the National Strategy for the Development of Education in Ukraine for the Period until 2021: Presidential Decree of June 25, 2013 No. 344/2013] [online] (Ostannie onovlennia 06 Sytchen 2015) Dostupno: <http://zakon3.rada.gov.ua/laws/show/5/2015> [Data zvernennia 15 Veresen 2019], [in Ukrainian].

Ministerstvo osvity i nauky Ukrainy, 2019. *Suchasna profesijna osvita: proekt konceptualnyx zasad reformuvannya profesijnoyi osvity Ukrayiny [Modern Vocational Education: Draft Conceptual Framework for the Reform of Vocational Education in Ukraine]* [online] (Ostannie onovlennia 18 Traven 2019) Dostupno: <https://mon.gov.ua/ua/news/mon-rozrobilo-proekt-konceptualnih-zasad-reformuvannya-profesijnoyi-osviti-ukrayini-suchasna-profesijna-osvita> [Data zvernennia 15 Veresen 2019], [in Ukrainian].

Melnyk, S., 2019. *Kompleksnyj analiz systemy profesijno-texnichnoyi osvity Luganskoyi oblasti [Summary of the study «Comprehensive analysis of the system of vocational education in Luhansk region»]*. [online] UNDP. Available at: <https://www.undp.org/content/dam/ukraine/docs/Donbas/RPP/analysis%20of%20the%20vocational%20education% 20and%20training%20system%20in%20luhansk%20oblast_UKR.pdf> [Accessed 10 September 2019], [in Ukrainian].

Radkevych O.P., 2012a. Konfidentsiinist personalnoi informatsii u sotsialnykh merezhakh [Privacy of personal information in social networks]. *Visnyk Vyshchoi rady yustytsii [Bulletin of the High Council of Justice],* 3(11), s. 215-223, [in Ukrainian].

Radkevych O.P., 2012b. Zabezpechennia okhorony i zakhystu personalnoi informatsii u Spoluchenykh Shtatakh Ameryky ta Velykii Brytanii [Ensuring the safety and protection of personal information in the United States and Great Britain]. *Visnyk Vyshchoi rady yustytsii [Bulletin of the High Council of Justice],* 1(9), s. 141-153, [in Ukrainian].

Radkevych, O.P., 2017. Profesiinyi rozvytok vykladachiv i treneriv zakladiv profesiinoi osvity v krainakh Yevropeiskoho Soiuzu [Professional development of teachers and trainers of vocational education in the European Union]. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPN Ukrainy. Profesiina pedahohika [Scientific Herald of the Institute of vocational education and training of NAES of Ukraine. Professional Pedagogy],* 13, c. 130-139, [in Ukrainian].

Maliha, A., Muhammad, J. and Ali, A., 2015. Use of Result Based Management (RBM) Framework for Monitoring Projects of Public Sector in Pakistan – A Case Study, *International Journal of Innovation, Management and Technology,* [online] vol. 6, n. 2. Available at: <https://www.researchgate.net/publication/318470915_Use_of_Result_Based_Management_RBM_Framework_for_Monitoring_Projects_of_Public_Sector_in_Pakistan_-_A_Case_Study> [Accessed 10 September 2019], [in English].

Results Based Management Concepts and Methodology 2000. [online] UNDP Results Framework. Technical Note. Available at: <http://web.undp.org/evaluation/documents/RBMConceptsMethodgyjuly2002.pdf> [Accessed 10 September 2019], [in English].

Results-based management handbook. Applying RBM concepts and tools for a better urban future 2017. [online] UN-Habitat Results-Based Management Handbook. Available at: <https://urbangateway.org/system/files/documents/urbangateway/un-habitat_rbm_handbook_complete_0.pdf>[Accessed 10 September 2019], [in English].

Results-based Management Handbook. Harmonizing RBM concepts and approaches for improved development results at country level 2011. [online] United Nations Development Group. Available at: <https://www.academia.edu/29138271/RESULTS-BASED_MANAGEMENT_HANDBOOK_Harmonizing_RBM_concepts_and_ approaches_for_improved_development_results_at_country_level> [Accessed 10 September 2019], [in English].

Results-Based Management Handbook: Working together for Children 2017. [online] United Nations Children's Fund (UNICEF). Available at: <https://www.pndajk.gov.pk/uploadfiles/downloads/RBM_Handbook_Working_Together_for_Children_July_2017.pdf> [Accessed 10 September 2019], [in English].

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Упровадження орієнтованого на результат управління в діяльність закладів професійної (професійно-технічної) освіти

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Реферат.

Актуальність: необхідність підвищення ефективності управління закладами професійної (професійно-технічної) освіти, впровадження інноваційних підходів до управління з метою забезпечення сталого розвитку закладу в умовах підвищення конкуренції на ринку освітніх послуг.

Мета: аналіз результатів упровадження орієнтованого на результат управління (Results-based management) в діяльність закладів професійної (професійно-технічної) освіти (на прикладі Донецької і Луганської областей) та розроблення рекомендацій щодо ефективного впровадження зазначеного управлінського підходу.

Методи: теоретичний аналіз, синтез, індукція, екстраполяція, опитування, самооцінювання, статистичне оброблення результатів.

Результати. З'ясовано, що сучасні політичні, економічні, соціально-демографічні чинники істотно обмежують розвиток сфери професійної (професійно-технічної) освіти в Донецькій і Луганській областях, що загострює необхідність пошуку нових імпульсів такого розвитку. Визначено, що пріоритетами щодо інтервенцій, крім іншого, має бути розвиток управлінської спроможності керівників закладів, зокрема розвиток їхньої управлінської компетентності. Показано, що в основі управління закладами має лежати концепція орієнтованого на результат управління (Results-based management). Здійснено теоретичний аналіз суті поняття "орієнтоване на результат управління", з'ясовано його істотні ознаки. Представлено специфіку програми розвитку управлінської компетентності керівників закладів професійної (професійно-технічної) освіти в Донецькій і Луганській областях та результати її реалізації. Доведено, що в процесі розроблення відповідної програми варто брати до уваги принципи системності, ціннісної зорієнтованості, контекстності, саморозвитку, поліфункціональності, безперервності, диверсифікації, інтеграції, результативності. Визначено, що програмою мають передбачатись етапи очного навчання (тренінги на модульній основі), міжсесійного посттренінгового супроводу учасників, самостійної роботи (створення стратегій розвитку закладів), оцінювання (моделює оцінювання результативності діяльності керівника закладу різними стейкхолдерами). Представлено результати опитування експертів щодо: релевантності запропонованих управлінських інструментів специфіці управлінської діяльності керівників закладів, важливості зазначених інструментів, з точки зору ефективної реалізації орієнтованого на результат управління, готовності до впровадження цієї концепції в управлінську діяльність, наявного досвіду використання запропонованих інструментів. Виявлено проблеми, пов'язані з упровадженням орієнтованого на результат управління в діяльність закладів професійної (професійно-технічної) освіти. Запропоновано рекомендації щодо подолання зазначених проблем.

Висновки. Гострою є необхідність підвищення управлінської спроможності керівників закладів професійної (професійно-технічної) освіти; програму такого розвитку доцільно реалізувати за технологією змішаного навчання; концептуальною основою виокремлення змісту має стати орієнтоване на результат управління; зміст програми має відповідати критеріям практичної зорієнтованості та технологічності. Для уникнення проблем низької вмотивованості до подальшого використання набутих під час навчання компетентностей доцільним є підтримання подальшої взаємодії з керівниками закладів, які продемонстрували високу особисту вмотивованість упродовж періоду навчання.

Ключові слова: *орієнтоване на результат управління, заклад професійної (професійно-технічної) освіти, управлінська компетентність, керівник закладу, змішане навчання, готовність до впровадження інновацій.*

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PROJECT MANAGEMENT SOFTWARE IN THE FIELD OF PROFESSIONAL (VOCATIONAL) EDUCATION

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Abstract.

Relevance. The digitalization of society and education has changed approaches to management behaviour, which is noticeable in terms of project management in professional (vocational) education schools. It has led to the allocation of resources to ensure the effective functioning of professional (vocational) education schools and enhance their competitiveness by improving their internal processes and expanding the range of educational services provided to students and the adult population.

Aim: the study aims to clarify the characteristics of project management in the field of professional (vocational) education through the use of specialized software.

Methods. Analysis of project management software. This method made it possible to differentiate the software into structural elements. It allowed establishing interconnections between the elements of the software as a system. Certain features of an internal logical construction of the software interface for project management were described by using external and internal interpretations (the descriptive method) and the method of analysis. Such methods as comparison and collation play an essential place in the study. By comparison, the differences between the software products were determined. By collation, the similarities between the software for project management were clarified and, as a result, its specificity.

Results: the list and key features of project management software in the field of professional (vocational) education were outlined.

Conclusions: project planning in professional (vocational) education schools is used for displaying the schedule of project objectives graphically and visualizing the interaction between its internal objectives; document sharing and teamwork implemented through a central document repository; exchange of calendars and contacts: project schedules, dates of activities and contacts, which should be automatically updated in all calendars of the persons conducting project activities; control over failures and unforeseen consequences.

Keywords: *software, project management, professional education, the critical path method, Gantt chart, Trello, Bitrix24, Microsoft project.*

Introduction. The rapid development of technological progress and the digitization of society and education have changed approaches to management behaviour, which is particularly evident in project management in the field of professional (vocational) education at all levels, including administrative. Project activities enable the effective use of fiscal and human resources to achieve educational and management goals. It is reinforced by the increase in internal competition among professional (vocational) education schools (hereinafter "P(V)E schools"), which results in the provision of quality educational services in a short time. In this regard, project activities in the field of education should be aimed at ensuring the effective functioning of P(V)E schools, enhancing their ability to outperform their competitors based on continuous improvement of their internal processes and expanding the range of educational services they provide to students and adults. In this context, software-based project management is crit-

ical for P(V)E schools to reach quality indicators of education and production activities.

The study aims to clarify the characteristics of project management in the field of professional (vocational) education through the use of specialized software.

Research methods: The scientific search is mostly based on the **analysis** of project management software. This method made it possible to differentiate the software into structural elements. It allowed establishing interconnections between the elements of the software as a system. Certain features of an internal logical construction of the software interface for project management were described by using external and internal interpretations **(the descriptive method)** and the method of **analysis**. Such methods as **comparison** and **collation** play an essential place in the study. By comparison, the differences between the software products were determined. By collation, the similarities between project management software were clarified and, as a result, its specificity.

Materials. Such scholars as Yu. Burimenko, L. Galan, I. Lebedeva, A. Shchurovskaya (2017), O. Borodienko (2015, 2017), O. Radkevych (2011) studied theoretical and practical aspects of project work execution, functioning of administrative staff competency assessment systems, software personalization Besides, O. Marynovska (2016), M. Zagirnyak (2015), Yu. Guseva, M. Kantsevich, I. Chumachenko (2015) analyzed technological management of innovative projects in the field of education, in particular in terms of economic, resource and quality factors.

Such foreign researchers as A. Kinser, K. Jacobson (2017) paid particular attention to the issues of project management. However, current approaches to using project management software in P(V)E schools are still poorly researched. Given this, the authors of the article consider it necessary to disclose the problem of choosing software for project management in the field of professional (vocational) education, both from theoretical and applied perspectives.

Results and discussion. The justification of modern approaches to project management in the field of professional (vocational) education causes the need to define the term "project activity", which is a component of project management and implies consistent and purposeful work on setting project timelines, managing human resource, avoiding risks, enhancing the quality of the project's product and reaching expected outcomes. Such activity aims to analyze, monitor, plan and control project activities. In this context, software tools will aim to manage projects more effectively and achieve better project results. Thus, unlike traditional methods, the use of software slightly simplifies project management through the use of electronic resources, which makes it possible to operate a vast array of resources and information.

The term "software" for project management covers a wide variety of software, which may include several different combinations and functions. Most programmes on project management include Gantt charts *(see Fig. 1)* to display the project schedule visually. It was named after Henry Gantt, who adapted and promoted the use of a graphic style in project activities (Kinser A., Jacobson K. 2017). The chart is actively used to evaluate the sequence of project objectives, their timelines and workload visually. It is also applied in modern project management software.

The critical path method is rather vital for project management in P(V)E schools *(see Fig. 2)*. It is a step-by-step methodology with a multi-step project planning algorithm that involves complex interdependent actions. A critical path method is a crucial tool for managing any project since it identifies critical

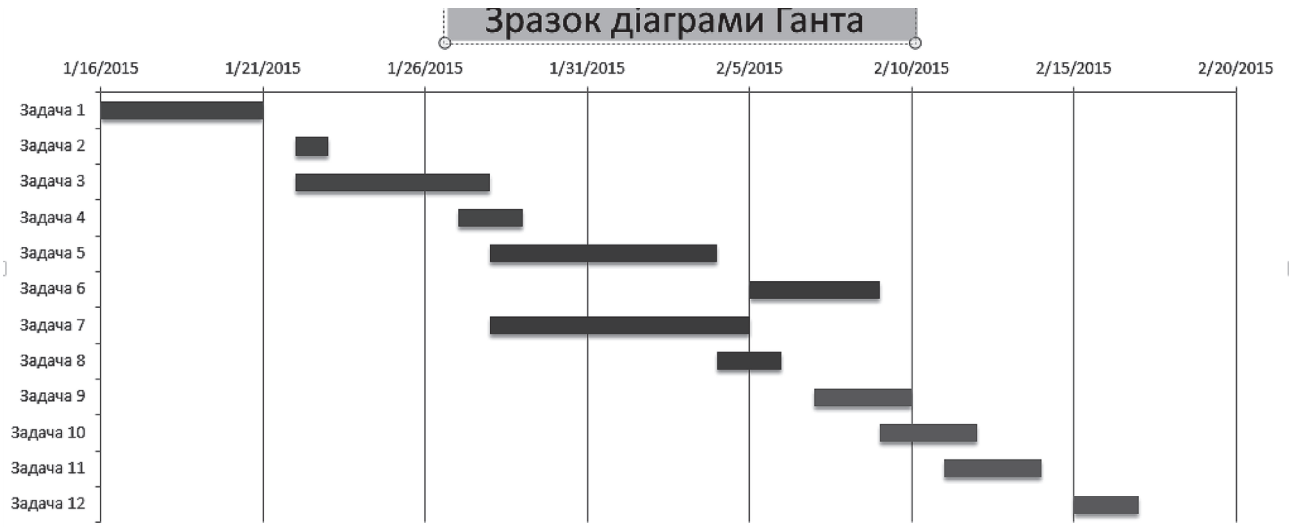

Fig. 1. An example of a Gantt chart

and non-critical project objectives. It is often used to analyze the logic of a project network to maximize its effectiveness.

It seems only logical that the critical path method is a system of time and resource management needed to complete any project. An essential element of this system is that all tasks within the critical path are relevant and cannot be postponed or overlooked in the course of work on the project without damage to the latter. The differentiation of the time required for the project implementation depends on the available resources. Besides, one should divide the critical path method into elements. First, it is essential to outline priority tasks. Second, it is crucial to prepare a list of project tasks. Third, it is vital to create a flowchart (Gantt chart) that covers all the tasks. Fourth, it is required to identify relevant, critical and non-critical project tasks. Fifth, it is essential to allocate time to project tasks (lead time). Sixth, it is necessary to study all alternatives to the course of events with timelines and supplement the project flow chart with them. With this in mind, one should be able to quickly track the progress of the project, which involves concurrent (simultaneous) project activities and the involvement of additional resources (human, material, technical) to shorten the time for its implementation. However, this can increase resource expenditure and, in some cases, the project life cycle.

During the project implementation, it is equally essential to use specialized software. In this context, the overview of the functions of such software is up-to-date. First, it includes designing the structure of project tasks and their implementation plans, describing critical parameters of the project, establishing logical links between the tasks, ensuring a multi-level project presentation and supporting the project calendar. Second, it implies financial and resources planning, which covers the project team, expenditure plans, available resources, inventory and daily expenditure and explains the allocation of resources and costs and support for resource and deadline schedule in case of limited resources. Third, it means monitoring the progress of the project, which includes fixing the planned parameters of the project in the database, inserting factual performance indicators, listing actual workload and resources, comparing expected and factual indicators, forecasting performance. Fourth, it involves the tools for a graphic display of the project structure and a generation of various project reports, namely, Gantt chart, network diagrams (PERT charts), reports on the project implementation, resource use and expenditures. Fifth, it is related to organizing group work (Zahirniak, 2015).

Project management can use both fixed and online platforms. The fixed platform is installed on the PC and synchronized with other computers used by the project team. The online platform has all the features of the fixed platform and is located on cloud services. It allows the project team to work from anywhere using a smartphone, tablet or laptop. Thus, it enables distance working, which is an essential argument for the leaders of P(V)E schools.

Online software can be used in project management. It refers to ordinary software with secondary functionality and basic functionality required in P(V)E schools. The features of such software include task management, team collaboration, tutorials, email integration and file management. The sophisticated software includes more project elements covering the

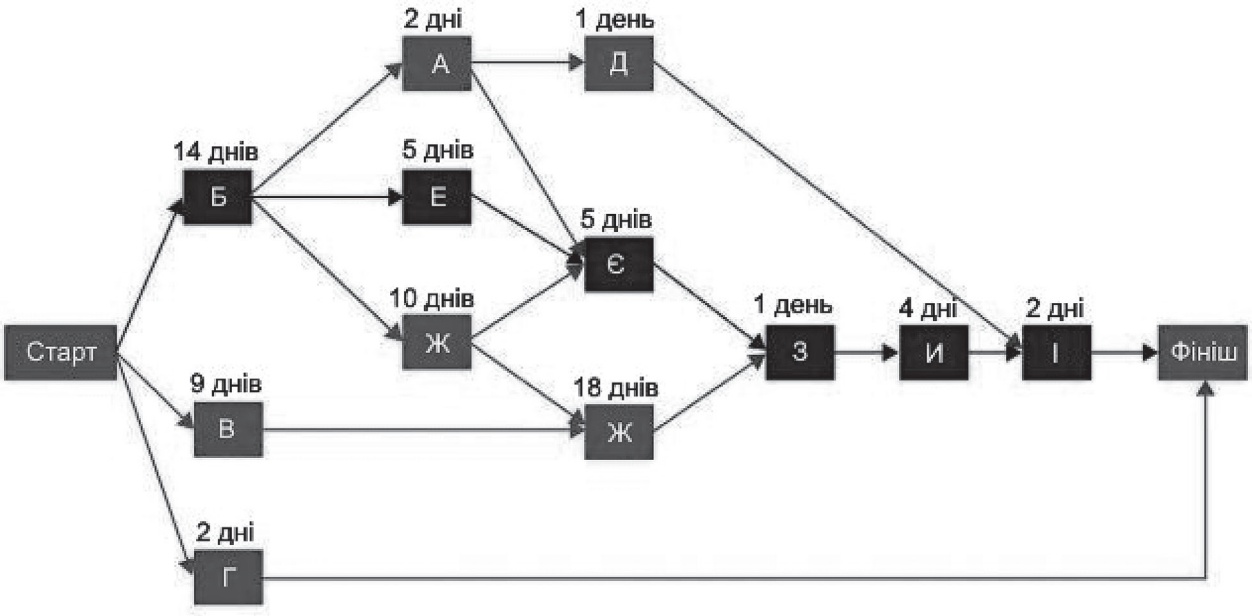

Fig. 2. Visualization of the critical path method

main functions of project management and additional ones, such as planning, resource management, financial management, task management. Depending on the type of software, one can control the results even better and monitor the project progress in real time.

One should be able to define the essential functions of project management to better understand it using the software. *Task management* is one of the important ones. Also, the software should provide users with the ability to install dependencies on the content of the task, create and manage sub-tasks for more significant tasks, set tasks for practice at a specified time and appoint more than one actor to the task. Not least important, there is the import of a to-do list from an external file, such as a spreadsheet and *team collaboration,* which allows any number of individuals to not only communicate but also have discussions about project activities, which is a must element of their success. Therefore, the software should provide a virtual space for comfortable discussion, document creation, and sharing and messaging between the project team. *Tutorials* also play a significant role in the software. Regardless of his or her level of computer skills, anyone can learn, get acquainted with scientific developments, watch video lessons, participate in webinars, plan their working hours. As a result of reduced instruction time, the software also allows users to spend more time doing their work. Email is of great value for project management since it enables communication with the project participants. Being able to receive and send emails dramatically improves the productivity of project activities by minimizing the programme changing time. Emails can be a source of status updates. Finally, new tasks or work progress reports can be emailed, too.

The features of *document management* include secure document storage, ability to attach documents to tasks, posting of notes and comments on uploaded documents, upload of multiple documents, organization of documents in folders and control over their versions. With this in mind, **mobility/remotability** in project management becomes relevant, especially in terms of performing project tasks. Given this, the critical feature of such work is the software that supports the possibility of remote work among leaders in P(V)E schools. Many organizations with which P(V)E schools cooperate already use various project management systems, other than those established in the institutions. Therefore, the possibility to *integrate with third-party software* is significant for the development of cooperation.

The project management software in P(V)E schools enables clients to influence the workflow of both customers and performers, which is possible through settings. All project management decisions are usually similar to *reports*. However, there are different requirements for every particular case, which may sometimes imply more than just a general report. The software that can offer many types of reports will have some advantage over the much more straightforward options.

The software allows *scheduling*, such as setting task timings, creating timelines and milestones, determining dependencies and resources. It is the basic functionality of project management for P(V)E schools and, therefore, it is essential. It may not be so important, however, for organizations with simple, short-term projects, recurring tasks or small teams.

It must be noted that the function of *time management* has some limits because of its specific features. In P(V)E schools, it can be applied only to some projects, namely, to fulfil specific tasks with an indefinite or definite deadline. Thus, such software tracks the actual time needed to complete a project task and is valuable for long-term projects.

In project management in P(V)E schools, they mainly use freeware and shareware software. One should pay particular attention to **Trello** (2019). It is the software using the board method *(see Fig. 3)* when each whiteboard is a project with cards inside it. Cards are tasks that can be moved to different points within the project. Each card contains a list of project performers, due date and the recorded expected result. It must be noted that when registering in Trello, one can choose the area that is most suitable to the needs of professional (vocational) education. The point is

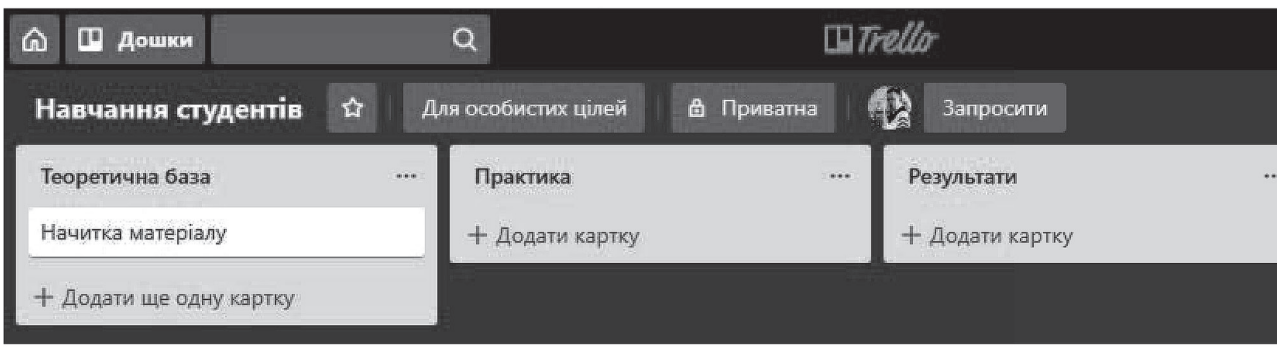

Fig. 3 A board for project management

that the software interface is usually understandable due to many language settings, including English and Ukrainian. The interface is customizable, too.

A simplified mechanism for involving project performers in teamwork is essential for the proper implementation of projects in P(V)E schools. Indeed, each card has its e-mail address. An e-mail sent to it will allow one to create a corresponding card with the subject of the e-mail and involve those to whom the e-mail was sent. Thus, when one adds a new card, he or she can also add members (performers) by typing in the search box the e-mail address of the person to be involved in the task. Besides, the settings include the ability to graphically highlight the task and choose the colour characterizing the importance of the task. One can also change the position of the card, moving it to the completed tasks. Moreover, one can leave comments on project tasks, which provides the performers with an opportunity to understand the specifics of the project task better.

It must be noted that this software belongs to online platforms and is shareware. It allows one to create any number of boards for project activities, cards, to-do lists, checklists and applications. However, the max size for attachments cannot be more than 10MB. Besides, it lacks the function of reports on the implementation of projects.

Bitrix24 (2019) is widely applied for project activities in P(V)E schools, too. It is a professional software with many functions, aimed at integrated project management and cooperation with performers and clients depending on the specifics of P(V)E schools *(see Fig. 4)*.

This software aims to improve the cooperation in P(V)E schools since it combines various means of communication in a single software solution. It is expressed through a built-in chat and video conferencing tool for real-time communication. The built-in features include calendars, both private and shared. **Bitrix24** can turn the sent email into a task for the project members and also function as a private social network. Users can collaborate through document sharing and storage. An essential element of this software is a full-fledged personnel management system, work reports and workflow automation.

The function of cooperation is rather useful for P(V)E schools since it incorporates time management tools and allows one to set start and end dates for each project member. Based on this, **Bitrix24** automatically tracks the time of task completion as well as the display of project tasks in Gantt charts. Project members can plan project activities, manage resources and track work progress.

The monitoring of project activities is possible with the help of project reports and task counters within the project. Other functions include ready-made templates, recurring tasks, dependencies between project tasks, checklists, custom fields for tasks.

This software has an integrated support team and contact centre that can assist clients in real time. The multichannel contact centre includes chat, telephony, email, social networking and instant messaging.

One should also pay specific attention to a website creation tool that allows creating free websites, landing pages, online stores.

Bitrix24 comes with a shareware programme that is limited to 12 users and 5GB of storage. It is equipped with automation features, email marketing integration and file sharing. The main features of the free version include task management, resources, Kanban boards, which helps to conduct activities and prepare project task reports. It has 5GB of project memory within the file-sharing project, project marketing, as well as the use of email, automatization mechanisms.

Taking into account all the challenges put before P(V)E schools, the most functional software is **Microsoft Project**, which is a specialized software tool designed for project management. It allows one to plan projects, track their implementation, collaborate with participants without being tied to a specific workplace. The programme provides real-time communi-

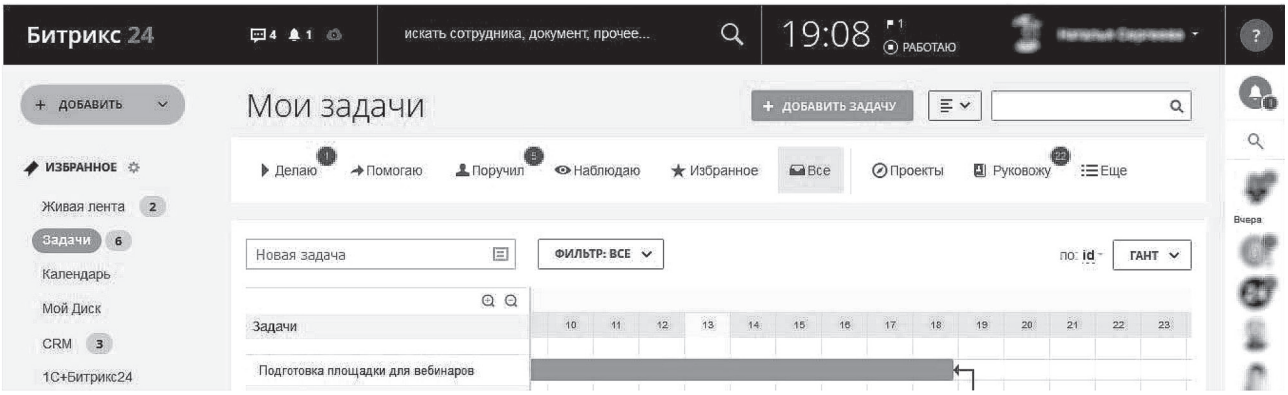

Fig. 4 The contacts menu in Bitrix24

cation, and instant messaging within the project plan via Skype for Business and consolidates all potential project resources in a single task. **Microsoft Project** is divided into two versions: standard and professional. The main difference between them is only the more advanced features and the ability to use Office 365 in the professional version. It is shareware, with a trial period of 14 days, after which it is proposed to purchase the software. With this in mind, it is necessary to highlight some of its key elements. Thus, the first time the software is used, the user will be prompted to create a new project *(see Fig. 5)* or to choose an online project template by searching for keywords.

After choosing the required template, the user goes to the work area of the programme, which consists of tabs, such as task, resource, report, project, submission, help, format and auxiliary search module *(see Fig. 6)*. Each tab is responsible for a specific area of action in the project. It must be noted that the tabs are user-friendly and arranged in a logical sequence.

Given this, it is suggested to consider the process of creating a project based on a template. After launching the programme, one should click "create" and then choose the template that most closely matches the type of project activity. To do this, one goes to the field "Search for online templates" and chooses one of the options given. After that, one should decide on the start date of the project and click "create". Finally, one should set up the project itself, that is, set key project parameters in the project details window (menu item "project/project details"). This menu item determines the consequences of the planning process.

Microsoft Project offers two options for project planning. First is the start date of the project. It becomes the directive start date for the project itself. The rest of the work is scheduled as early as possible, meaning they have a possible start date. The project completion date is a calculation date and cannot be manually modified *(see Fig. 7)*.

The calendar field sets the calendar (schedule) of working time that will be used when planning work. In doing so, one should choose the calendar which P(V)E schools use. Based on the chosen template, project actions are proposed to complete the project. It must be noted that all project activities can be adjusted by adding, deleting and modifying tasks and their duration depending on work needs.

One should pay attention to such features as adding and removing project tasks. One needs to open "submissions" in the programme tab and click "Gantt

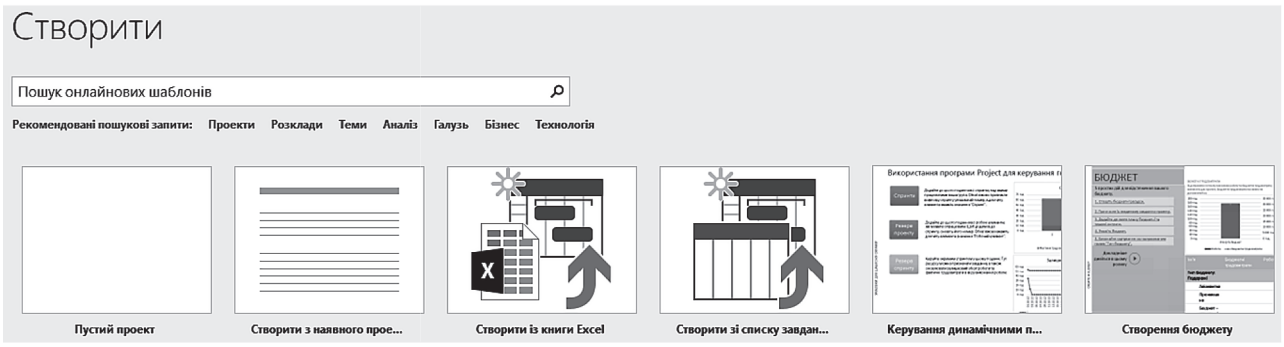

Fig. 5 Creating and searching for online project templates

Fig. 6 Tab sequence in Microsoft office 2019

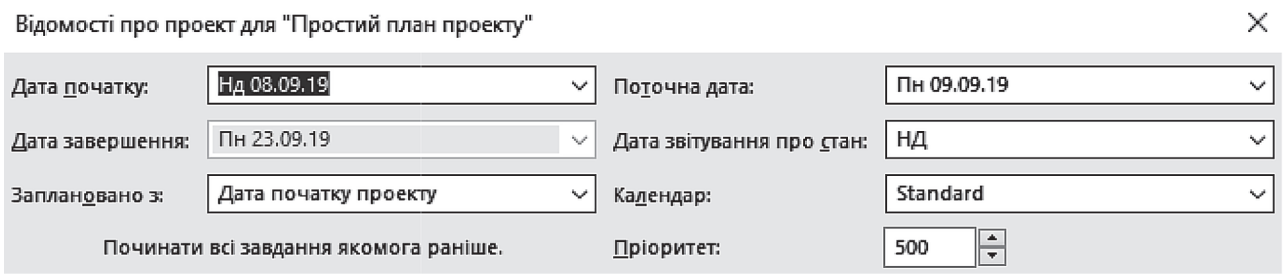

Fig. 7 Information about the project

chart" to add tasks to an existing project. It will show the project activities graphically. After that, one should type in the name of the task, the number of days it will take and determine the performer. If the performer is overloaded, a "red man" icon will appear in front of the project line *(see Fig. 8)*

One can add project members clicking tab "resources", "assign resources" *(see Fig. 9)*

It is necessary to pay attention to a graphical representation of the project itself, which is presented as a timeline *(see Fig. 10)*. It shows multiple timeline bars with date ranges. A well-formatted timeline is a valuable material when providing information to stakeholders and partners. Some formatting options of the software are similar to Microsoft Word. Indeed, the style definition affects the content of the document to which that style is applied.

While the software is undoubtedly useful for production and educational activities, it does have its drawbacks. One of the significant problems that project performers face is the lack of customization. Most software is generic and designed to work in many industries and project types, so there is currently no single software available for all project tasks. Project management software can also create an uneven focus for the project lifecycle. The project team may miss or delay essential tasks, such as goals and logical processes. When mistakes or omissions occur at the beginning of the project, they can lead to the loss of time and financial resources.

Conclusions. Therefore, project management software has the following essential functions. First, it is the ability to plan a project to determine its schedule, display its tasks and describe their interaction visually. Second, it is task management aimed at creating sharp deadlines for each task element and reports on the status of each key task element. Third, it is the sharing of documents and teamwork, which is realized through the repository of documents which the persons involved in the project can access. Fourth, it is the exchange of calendars and contacts: project schedules include scheduled meetings, dates of activities

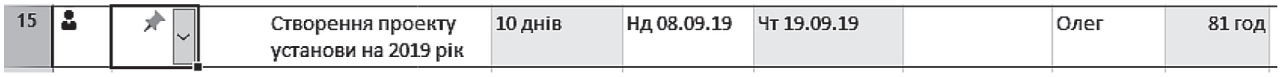

Fig. 8 A graphic representation of the completed project task

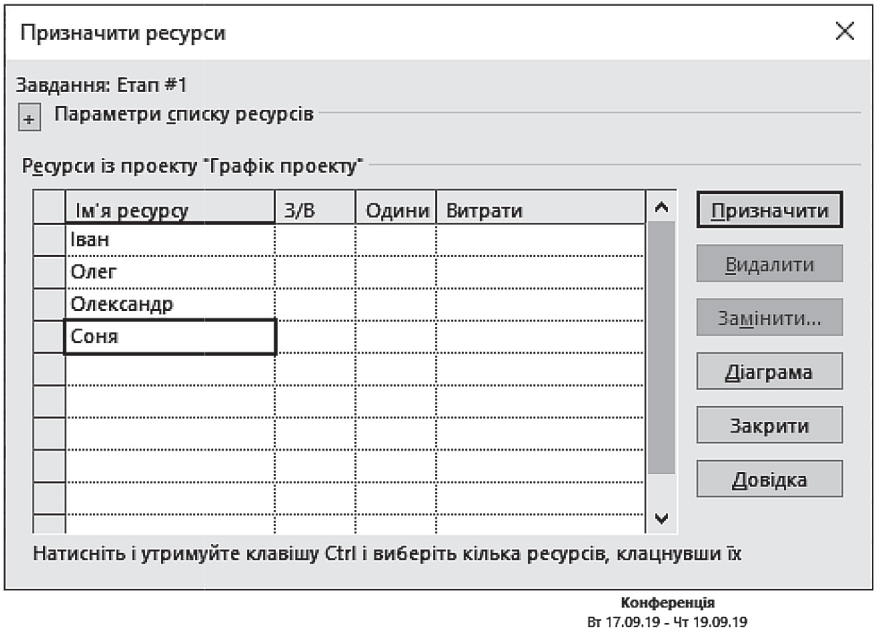

Fig. 9 A graphic view of the tab "add members to the project"

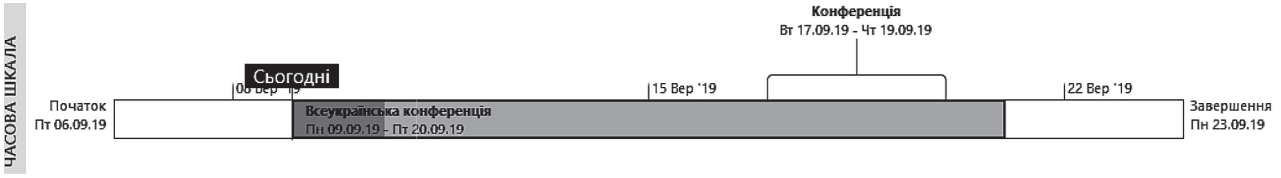

Fig. 10 A timeline in Project Management

and contacts, which should be automatically updated on all the calendars of the persons involved in the project. Fifth, it is the management of shortcomings and unforeseen consequences. With this in mind, the software facilitates reporting in situations when one can analyze the links between action, consequence and performer. Sixth, it is the tracking of time spent both on the project and each task in the project. It is also vital for the stakeholders of different projects. Thus, the software is aimed at simplifying project management in P(V)E schools.

List of References

Бітрикс24, 2019. [online] Доступно: <https://www.bitrix24.ua> [Дата звернення 16 Вересень 2019].

Бородієнко, О., 2015. Критерії, показники, рівні сформованості професійної компетентності керівників структурних підрозділів підприємств сфери зв'язку. *Молодь і ринок,* 7 (150), с. 109-115.

Бородієнко, О., 2017. Метод експертної оцінки в моделюванні системи розвитку професійної компетентності керівників. *Науковий вісник Ужгородського національного університету. Серія «Педагогіка, соціальна робота»,* 35, с. 35-38.

Буріменко, Ю., Галан, Л., Лебедєва, І. та Щуровська, А. 2017. *Управління проектами.* Одеса: ОНАЗ.

Гусева, Ю., Канцевич, М. та Чумаченко, И., 2015. Мультистейкхолдерная модель управления качеством образовательного проекта. *Вісник Національного технічного університету «ХПІ»,* 2, с. 8-13.

Загірняк, М., Перерва, П. та Маслак, О. ред., 2015. *Економіка підприємства: магістерський курс.* Ч.1. Кременчук: Кременчуцька міська друкарня.

Мариновська, О., 2016. Технологічне проектування інноваційного розвитку загальноосвітнього навчального закладу. В: *Розвиток форм та методів сучасного менеджменту, економіки, права в умовах глобалізації: 4-та Міжнародна науково-практична конференція.* Дніпропетровськ, Україна, 5-7 Квітень 2016. Дніпропетровськ: Свідлер А.Л.

Радкевич, О., 2011, До розуміння персональної інформації та персональних даних. *Інформаційні технології в глобальному управлінні,* 10, с. 122-124.

Kinser A., Jacobson K. 2017. *Getting Started with Project Management Using Microsoft® Project 2016 Second Edition. Redmond:* Microsoft Press.

Trello, 2019. [online] Available at: <https://trello.com> [Accessed 16 September 2019].

Translated & Transliterated

Bitryks24, 2019. [online] Dostupno: <https://www.bitrix24.ua> [Data zvernennia 16 Veresen 2019], [in Ukrainian].

Borodiienko, O., 2017. Metod ekspertnoi otsinky v modeliuvanni systemy rozvytku profesiinoi kompetentnosti kerivnykiv. [Method of peer review in modeling the development system of professional competence of managers]. *Naukovyi visnyk Uzhhorodskoho natsionalnoho universytetu. Seriia «Pedahohika, sotsialna robota» [Scientific Herald of Uzhgorod National University. Pedagogy, Social Work Series],* 35, s. 35-38, [in Ukrainian].

Borodiienko, O., 2015. Kryterii, pokaznyky, rivni sformovanosti profesiinoi kompetentnosti kerivnykiv strukturnykh pidrozdiliv pidpryiemstv sfery zviazku. [Criteria, indicators, levels of professional competence of heads` of structural divisions of telecommunication enterprises]. *Molod i rynok [Youth and market],* 7 (150), s. 109-115, [in Ukrainian].

Burimenko, Yu., Halan, L., Lebedieva, I. ta Shchurovska, A., 2017. *Upravlinnia proektamy [Project management].* Odesa: ONAZ, [in Ukrainian].

Guseva, Yu., Kantsevich, M. ta Chumachenko, I., 2015. Multisteykholdernaya model upravleniya kachestvom obrazovatelnogo proekta [The multistakeholder model of educational project quality management]. *Visnik Natsionalnogo tehnichnogo universitetu «HPI» [Journal of the National Technical University KhPI],* 2, s. 8-13, [in Russian].

Zahirniak, M., Pererva, ?. ta Maslak, O. red., 2015. *Ekonomika pidpryiemstva: mahisterskyi kurs [Enterprise economics].* Ch.1. Kremenchuk: Kremenchutska miska drukarnia, [in Ukrainian].

Marynovska, O., 2016. Tekhnolohichne proektuvannia innovatsiinoho rozvytku zahalnoosvitnoho navchalnoho zakladu [Technological design of innovative development for a comprehensive school. Developing forms and methods of modern management, economy, law under the conditions of globalization]. V: *Rozvytok form ta metodiv suchasnoho menedzhmentu, ekonomiky, prava v umovakh hlobalizatsii: 4-ta Mizhnarodna naukovo-praktychna konferentsiia [Developing forms and methods of modern management, economy, law under the conditions of globalization: 4-th International scientific and practical conference].* Dnipropetrovsk, Ukraina, 5-7 Kviten 2016. Dnipropetrovsk: Svidler A.L., [in Ukrainian].

Radkevych, O., 2011. Do rozuminnia personalnoi informatsii ta personalnykh danykh [To understand personal information and personal data]. Informatsiini tekhnolohii v hlobalnomu upravlinni]. I*nformatsiini tekhnolohii v hlobalnomu upravlinni [Information technology in global management],* 10, s. 122-124, [in Ukrainian].

Kinser, A. and Jacobson, K., 2017. *Getting Started with Project Management Using Microsoft® Project 2016 Second Edition*. Redmond: Microsoft Press.

Trello, 2019. [online] Available at: <https://trello.com> [Accessed 16 September 2019], [in English].

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Програмне забезпечення управління проєктами у сфері професійної (професійно-технічної) освіти

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Реферат.

Актуальність. Діджиталізація суспільства та освіти змінила підходи до управлінської діяльності, що помітно в частині управління проєктною діяльністю в закладах професійної (професійно-технічної) освіти. Це зумовило спрямування ресурсів на забезпечення ефективного функціонування закладів професійної (професійно-технічної) освіти, випередження ними конкурентів на основі безперервного вдосконалення своїх внутрішніх процесів та розширення спектра освітніх послуг, які вони надають здобувачам освіти та дорослому населенню.

Мета: розкрити особливості управління проєктами у сфері професійної (професійно-технічної) освіти із застосуванням спеціалізованого програмного забезпечення.

Методи. Метод аналізу програмного забезпечення для управління проєктною діяльністю. Із використанням даного методу було здійснено диференціацію програмного забезпечення на структурні елементи. Це слугувало встановленню взаємозалежних зв'язків між елементами програмного забезпечення як системи. Використовуючи зовнішню і внутрішню інтерпретації (описовий метод) та на основі методу аналізу описано особливості внутрішньої логічної побудови інтерфейсу програмного забезпечення для управління проєктною діяльністю. Важливе місце в дослідженні належить зіставному та порівняльному методам. Шляхом зіставлення було встановлено відмінності між програмними продуктами, а шляхом порівняння – тотожності програмного забезпечення для управління проектами, на основі чого визначено його специфіку.

Результати: окреслено перелік та ключові характеристики програмного забезпечення для управління проєктною діяльністю у сфері професійної (професійно-технічної) освіти.

Висновки: планування проєктів у закладах професійної (професійно-технічної) освіти слугує для графічного відображення графіка завдань проєкту й візуального опису взаємодії його внутрішніх завдань; спільного використання документів та роботи в команді, що реалізується за допомогою центрального сховища документів; обміну календарями та контактами: графіки проєкту, дати діяльності та контакти, що повинні автоматично оновлюватися у всіх календарях осіб, які здійснюють проєктну діяльність; управління невдачами та непередбачуваними наслідками.

Ключові слова: *управління проєктами, програмне забезпечення, проєктний менеджмент, професійна освіта, метод критичного шляху, діаграма Ганта, Trello, Bitrix24, Microsoft project.*

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THE USE OF THE CLASSTIME PLATFORM IN THE CONTEXT OF INCLUSION

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Abstract.

Relevance: the need to provide equal rights and create opportunities for the education of individuals with different educational needs at all educational levels including higher education as well. It is stated that the issues of realization of education continuity and lifelong learning have resulted the need for scientific, methodological and technical support of the educational process of higher education institutions in the conditions of inclusion.

The purpose: the article analyzes the possibilities of the modern Internet resource – Classtime, online platform which was created to adapt the process of teaching mathematics according to the individuals' needs and opportunities of higher education students in the conditions of inclusion.

Methods: analysis, synthesis and generalization.

Results. After having used the Classtime platform it has been determined that this service improves the quality of mathematics training for students' higher education in inclusion and has several benefits for both teachers and students. The resource offers a wide opportunity to analyze each student's learning activities and achievements, identifies the need for additional explanation and correction by the teacher depending on the actual state of material learning. Classtime platform is claimed to adapt the process of teaching mathematics to specific educational needs and to implement an individual approach to all higher education students by partially compensating for functional limitations caused by certain diseases, for example, for visually impaired people – increasing the size of text to the proper size, for people with hearing impairments – the maximum visualization of the test, for people with disorders of the musculoskeletal system – the opportunity to focus more on the pre task activity, due to the simplicity of right answer choice and no need to write it.

Conclusions. Finally it is stated that scientifically proven and pedagogically aimed usage of modern Internet resources will allow students to fully participate in the educational process and create conditions for the implementation of their individual educational projects. The further perspective is to develop a methodology for mathematics teaching in the conditions of inclusion using information and communication technologies and to provide appropriate educational and methodological support.

Keywords: *information and communication technologies; Internet resources; mathematical preparation; higher education; inclusive teaching; individual needs and abilities.*

Introduction. New technologies have become an integral part of society and everyone's life in particular. And when a society is able to meet its needs in various fields using the capabilities and services, provided by specially trained professionals, then an individual can rely only on his/her own strength and abilities which are different in each person.

One of the priorities of the state (Ukrainian) policy in education is to ensure equal rights and create opportunities for the education of students with different educational needs at all educational levels, including higher education as well. The issues of implementing in education system that provides continuity and lifelong learning have resulted in the need for a going

support which is scientific, methodological and technical of the educational process of higher education institutions (HEI) in the conditions of inclusion. The organization of inclusive education in HEI is carried out in accordance with the Decree of Ukraine Cabinet of Ministers No. 635 (July 10th, 2019) "On approval of the Procedure for the organization of inclusive education in higher education institutions". At the present stage the educational process of students with psychological and physical disabilities requires the development of appropriate materials educational and methodological and alongside the usage of information and communication technologies (ICT).

ICT usage improves the quality of education and also ensures accessibility and implementation of equal rights for all citizens to obtain education. The inclusive focus of ICT in the process of studying mathematics courses are obvious as mathematics training is an important component of training competitive and competent professionals for the labor market.

Sources. Some scholars and scientists, who have studied the problems of improving mathematical preparation through implementation of ICT include: V. Bykov, S. Velychko, M. Zhaldak, Y. Tryus, S. Semerikov, K. Slovak, O. Spivakovsky, K. Osadcha, I. Salnyk, O. Shavaliova. The issues related to the inclusion in Ukraine's higher education system and the support of students with special needs, were highlighted in the scientific works by V. Bondar, I. Ivanova, I. Kalinichenko, A. Kolupaieva, K. Kolchenko, H. Nikulina, L. Serdiuk, P. Talanchuk, H. Boyko, A. Kisliak, S. Misiak, V. Shyian. The analysis of the scientific achievements of domestic scientists shows the lack of well-developed approaches and methods for ICT implementation concerning inclusion in the processes of mathematics training of HEI students. The outlined problems initiate the necessity to provide appropriate scientific, technical and methodological support.

The aim of the paper. The article analyzes the possibilities of the modern Internet resource – Classtime, online platform which was created to adapt the process of teaching mathematics according to the individuals' needs and opportunities of higher education students in the conditions of inclusion.

The defined purpose demands the following tasks to be solved:

– characterize the peculiarities of mathematics training in HEI;

– identify ICT benefits of supporting inclusive learning/teaching;

– review other platform peculiarities of modern Internet resources;

– explore Classtime platform capabilities and highlight the benefits of its usage in the educational process.

Methods: the research methods, analysis and synthesis – to find out the state and level of problem investigation which is being studied; generalization – to formulate conclusions regarding the specifics of different functional limitations of higher education students and to create conditions for the realization of their individual educational trajectories through Classtime service.

Results and discussion. Teaching mathematics in HEI is characterized by a high level of complexity of learning material and abstractness of the subject, which requires considerable mental fortitude in mastering theoretical knowledge and practical skills. Teaching the subject requires a constant control over the logical presentation of new information, also it demands high attentive concentration, self-control, self-discipline, and the ability to share knowledge and finding with other students (Nosenko, 2018, pp. 199). However, due to inappropriate level of mathematics training at the previous stages of education, the other health problems during studying that caused attending less classes and combining learning and medical rehabilitation, all these facts create obstacles for people with disabilities. So there is a great necessity to adapt the educational process to their abilities, needs and opportunities.

The mathematics training quality in HEI, although the research concerns colleges, is exacerbated by the fact that students who complete a comprehensive secondary education, in accordance with the order of Ukraine Ministry of Education and Science No. 931 about "Some Issues of External Independent Assessment in 2019 the results of studies obtained on the basis of a complete general secondary education ", must be compiled by the state final certification in mathematics in the form of external independent assessment (EIT).

In order to improve the efficiency and quality of the mathematics learning process, it is advisable to use ICT, it enables to broaden and deepen the content of learning, it increases the clarity of learning material and it facilitates its perception through compact and clear presentation of educational information. ICT combines the students' learning motivation.

ICT usage also contributes to the activation of students' psychological physiological mechanisms:

– process of attention – individual approach and individual work involvement;

– process of perception – raising the emotional condition;

– process of memorizing – repetition and reflection on one's actions;

– process of abstract thinking – introduction of visual aids (Semerikov and Slovak, 2011).

Researcher Y. Nosenko, considering modern ICT support tools for inclusive learning, highlights the

following advantages (Nosenko, 2018, pp. 28):

– expanding student autonomy;

– reducing communication difficulties and barriers;

– presenting learning outcomes in a convenient way;

– development of educational tasks taking into account individual skills and abilities of students;

– accessing training information independently;

– pacing task for students' capabilities;

– using ICT as a compensatory tool accessing educational information in an alternative way;

– exchanging experience within teachers in terms of inclusion;

– supporting teacher's ICT skills to support effective work with students;

– expanding opportunities for preparation of learning materials, and teaching aids;

– simplifying the adaption of materials in digital format to meet the students' needs.

The practice of using up-to-date informational mathematical Internet resources demonstrates a significant improvement of the students' knowledge levels, which allows to provide information technology support and guidance of certain stages of inclusive learning. These resources are divided into the following groups: mass open source systems, adaptive learning platforms, video channels, mathematical online simulators, online mathematics tasks, mathematical online platforms, mathematical online environments, mathematical services, mathematics mobile applications, mathematics training sites etc.

Researchers have shown that there are thematic resources for mathematics in mass open learning systems, resources for implementing adaptive mathematics learning, watching videos, training math skills, solving math problems from different sections of mathematics, game activities, and for combining different educational activities services in one resource, providing a large number of diverse tasks for the development of logical thinking, the creation of dynamic mathematical models, the search and creation of interactive training materials in mathematics. Also there are mathematics applications that can be used from a mobile phone (smartphone) or tablet computer, as well as online theoretical and methodological resources containing methodical and didactic materials (Osadcha, 2017, pp. 39).

Enormous opportunities to support inclusive learning/teaching are opening up due to the intensive development of ICT, which is facilitating the emergence of new Internet resources. One of such services is Classtime online platform, which allows the teacher to perform knowledge testing based on the individual approach to each higher education student.

Having Ukrainian interface, the resource is understandable and accessible for using even with a minimum level of ICT skills. The service has an archive of test tasks and allows the teacher to find questions on any topic, so that there is an experience exchange between educators. The platform also provides the importation of all EIT sessions in mathematics tasks that, in our opinion, creates the conditions for effective preparation of students for the state final assessment in the form of EIT.

Classtime platform allows you to create your own group of questions using the following types of test tasks: selecting one or more correct answers, matching or sequencing, writing or text sampling, defining whether the statement or image is true. The service also allows you to add explanations, pictures and videos.

For testing the teacher must select a group of questions and start the session, making its settings *(Fig. 1)* according to the purpose (training, diagnostics, knowledge control, etc.).

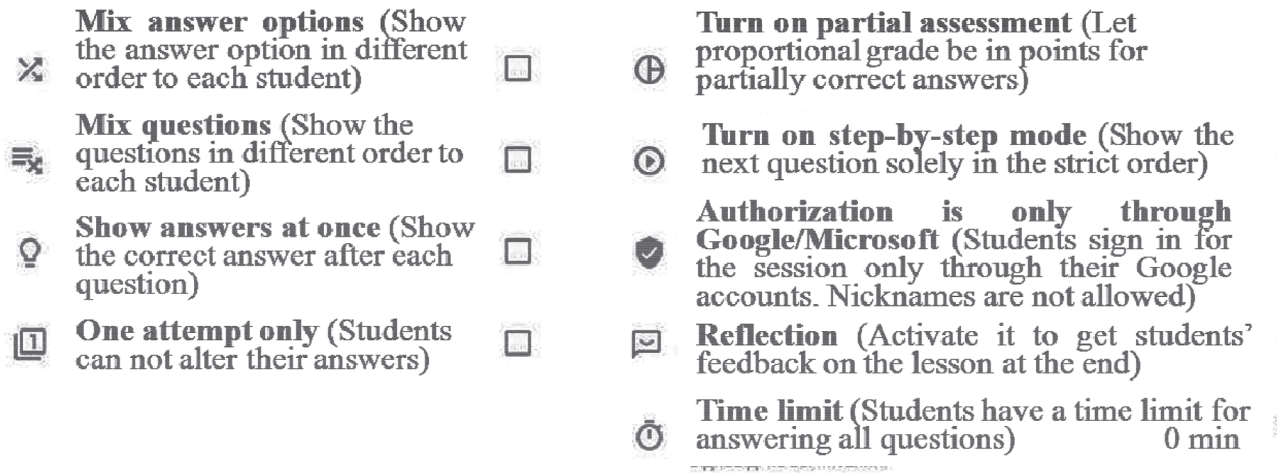

Fig. 1. Session settings

The possibility to mix questions and answer options, showing them to each student in different order, allows you to perform the same tasks for all participants of the test, which provides individu-alization of knowledge control, objectivity of assessment, creating a fair field for all higher education students.

In self-control tests students can see if the answer is correct after each question and modify it by tracing their own educational route.

The step-by-step setting method shows the next test question clearly and performs front-end testing.

In terms of individual characteristics, it is important to be able to determine the duration of testing since students with disabilities need more time to complete the tasks than healthy higher education students.

Students are required to sign in at https://www.classtime.com by entering a session code, last name and first name to complete the test from a smartphone or other gadget.

Using Classtime platform allows the teacher to see the test results online *(Fig 2),* which allows you to quickly assess the level of understanding and progress of each student individually and the whole group in general after having explained new material at the stage of generalization and systematization of knowledge.

Upon completion of the test, the platform allows you to download a report of the results of testing as a whole by group *(Fig. 3)* and for each task, in particular in different file formats PDF *(Fig. 4)* and Excel *(Fig. 5)*, which significantly improves the effectiveness of monitoring student learning activities and achievements.

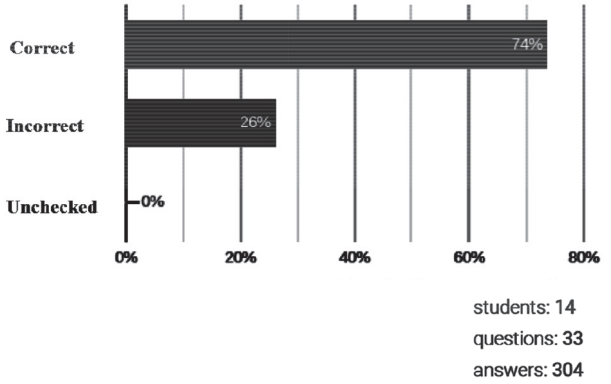

Fig. 3. Group test results

The analysis of the answers to each test task gives an opportunity to determine which questions are understood better by the students and which ones need further clarification *(Fig. 4)*.

Statistics of test results, successful attempts, average succeed on each question allows the teacher to analyze the content and, if needed make the necessary changes to the tasks themselves.

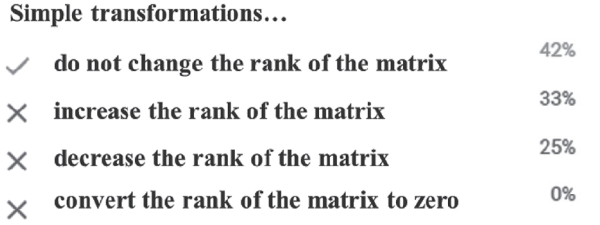

Fig. 4. Test results on each task in PDF format

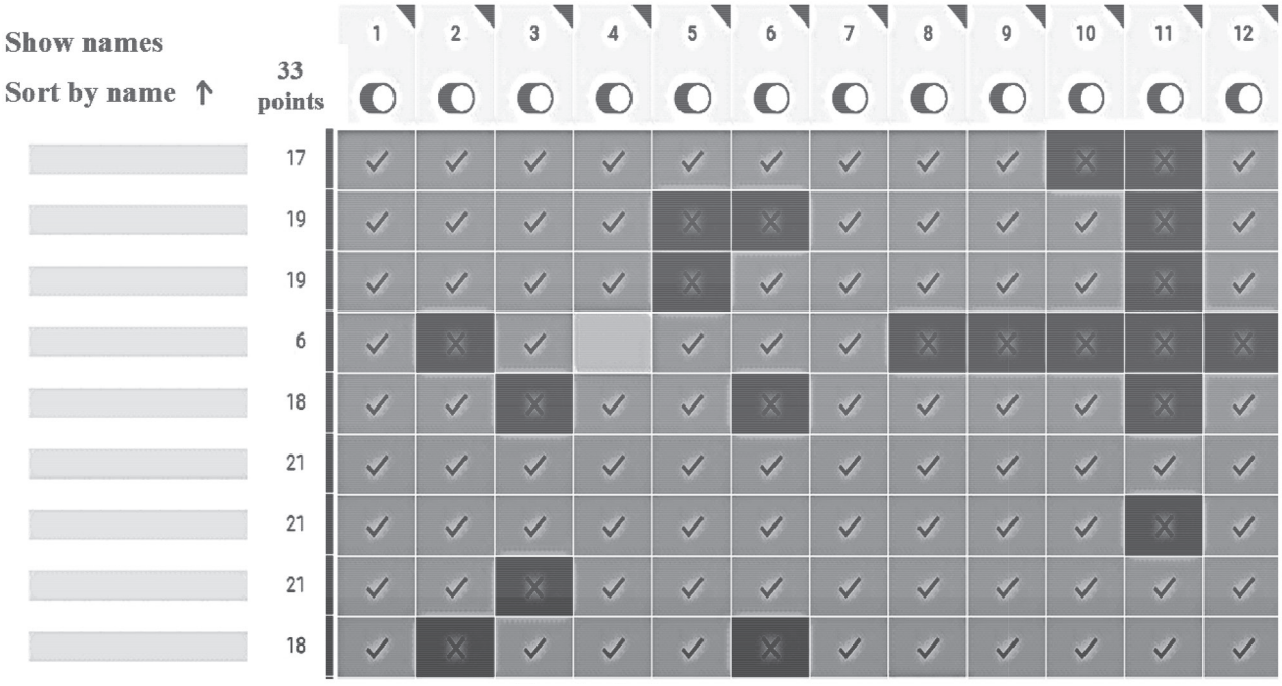

Fig. 2. Online test grades

Question 7 choice	Points	Simple transformations…
Student name	1	O O X O
Student 1	0	O X O O
Student 2	1	O O X O
Student 3	0	X O O O
Student 4	0	X O O O
Student 5	0	O X O O
Student 6	1	O O X O
Student 7	1	O O X O
Student 8	0	X O O O
Student 9	1	O O X O
Student 10	0	O X O O

Fig. 5. Test results on each task in Excel format

Using Classtime platform, the teacher can track the individual trajectory of the student's learning achievements *(Fig. 6)*, ie from what topics and sections he or she has completed tasks, student's learning pace, the order of the topics learned by a student, which topics or tasks caused difficulties. Being based on these data, the teacher can offer some advice to the student or give recommendations for the repetition of insufficiently studied material in order to deepen the knowledge of problematic topics.

The platform opens up great opportunities for analyzing each student's learning activities, determines the need for additional explanation and correcting actions by the teacher depending on the actual state of material learning.

Modern information technologies in the educational process are a means of improving the quality of mathematical training for higher education students in the conditions of inclusion and have several advantages for both teachers and students (Nosenko, 2018, pp. 28). The experience of using Classtime platform gives the following benefits for the teacher:

– saving time by using completed tests or developing one test for all students;

– keeping track of each student's educational progress and adjusting it as needed;

– providing special educational needs for all studentss;

– automatizing of knowledge assessment process;

– possibility to continuously improve learning courses on the basis of analysis of educational progress, peculiarities of passing of an individual trajectory by each student, which contributes to improvement education quality in HEI.

For higher education students the benefits of using Classtime platform are:

– equal conditions for passing the test through performing the same tasks by all participants and compensating for disorders of psychophysical development;

– self-analysis, control and self-correction made by the students, individual educational route , progress in the learning process through online feedback;

– possibility of passing the test outside the classroom;

– individual pace of completion of the test tasks.

Conclusions. Classtime platform usage helps adapt the process of mathematics teaching to specific educational needs and implement an individual approach to all higher education students, by partially compensating for functional limitations caused by certain diseases, for example, for people with visual impairments – the ability to increase the size of the task text, for people with hearing impairments – maximum visualization of the test, for people with disorders of the musculoskeletal system – the ability to focus more on thinking due to the simplicity of answer choice and there is no need to write it but only clicking.

For communication purposes the platform makes it possible to communicate with students who cannot attend classes due to illness and they have the chance to learn the course distantly.

Scores	%	Points	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11
Student name	100%	11	1	1	1	1	1	1	1	1	1	1	1
Student 1	82%	9	1	1	1	1	1	1	0	0	1	1	1
Student 2	91%	10	1	1	1	1	1	1	1	1	1	1	0
Student 3	18%	2	1	0	0	1	0	0	0	0	0	0	0
Student 4	64%	7	0	1	1	1	1	1	0	0	0	1	1
Student 5	73%	8	1	1	1	0	1	0	0	1	1	1	1
Student 6	55%	6	1	1	0	1	0	0	1	0	1	0	1
Student 7	55%	6	1	1	0	1	1	0	1	0	0	1	0
Student 8	27%	3	0	0	0	1	0	1	0	1	0	0	0
Student 9	82%	9	1	1	1	1	1	1	1	0	0	1	1
Student 10	27%	3	1	0	0	0	1	0	0	0	0	0	1

Fig. 6. Total test results

The main tasks that can be solved with the help of Classtime in the process of mathematical preparation of higher education students in inclusive education are:

– determination of the initial level of students' mathematical preparation when they begin to study at HEI;

– monitoring learning activity of each student;

– analysis and correction of learning progress.

So the usage of modern Internet resources is scientifically grounded and pedagogically appropriate, learning platforms take into account the specifics of different functional limitations of higher education students and that will allow them to fully participate in the educational process and create conditions for the implementation of their individual educational trajectories. Turning to the problem of providing quality education for each participant in the educational process in accordance with his/her needs and opportunities, it should be noted that the development of methods of teaching mathematics in the conditions of inclusion with the use of ICT and creation of appropriate educational and methodological support will have a perspective.

List of references

Classtime, 2019. [online] Доступно: <https://www.classtime.com> [дата звернення 24 Вересень 2019].

Верховна рада України. Законодавство України, 2019. *Про затвердження Порядку організації інклюзивного навчання у закладах вищої освіти: Постанова Кабінету Міністрів України від 10 липня 2019р. №635.* [online] Доступно: <https://zakon.rada.gov.ua/laws/show/635-2019-п> [Дата звернення 24 Вересень 2019].

Носенко, Ю. Г. ред., 2018. *Сучасні засоби ІКТ підтримки інклюзивного навчання: навчальний посібник.* Полтава: ПУЕТ.

Міністерство освіти і науки України, 2018. *Деякі питання проведення в 2019 році зовнішнього незалежного оцінювання результатів навчання, здобутих на основі повної загальної середньої освіти: наказ М-ва освіти і науки України від 22.08.2018р. №931.* [online] Доступно: <https://mon.gov.ua/ua/npa/deyaki-pitannya-provedennya-v-2019-roci-zovnishnogo-nezalezhnogo-ocinyuvannya> [Дата звернення 24 Вересень 2019].

Осадча, К. П., 2017. Тьюторський супровід навчання математики засобами інформаційно-комунікаційних технологій. *Інформаційні технології і засоби навчання,* [online] 61(5). Доступно: <https://www.researchgate.net/publication/326266154_Tutorskij_suprovid_navcanna_matematiki_zasobami_informacijno-komunikacijnih_tehnologij> [Дата звернення 24 Вересень 2019].

Семеріков, С. О. та Словак, К. І., 2011. Теорія і методика застосування мобільних математичних середовищ у процесі навчання вищої математики студентів економічних спеціальностей. *Інформаційні технології і засоби навчання,* [online] 1 (21). Доступно: <http://lib.iitta.gov.ua/106669/1/Теорія%20та%20методика%20 застосування%20мобільних%20математичних.pdf> [Дата звернення 24 Вересень 2019].

Translated & Transliterated

Classtime, 2019. [online] Доступно: https://www.classtime.com [Data zvernennia 24 Veresen 2019], [in Ukrainian].

Verkhovna Rada Ukrainy. Zakonodavstvo Ukrainy [Verkhovna Rada of Ukraine. Legislation of Ukraine], 2019. *Pro zatverdzhennya Poryadku orhanizatsiyi inklyuzyvnoho navchannya u zakladakh vyshchoyi osvity: Postanova Kabinetu Ministriv Ukrayiny vid 10 lypnya 2019r. №635 [On Approval of the procedure for Organizing Inclusive Education in higher education institutions: Resolution of the Cabinet of Ministers of Ukraine of July 10, 2019].* [online] Dostupno: <https://zakon.rada.gov.ua/laws/show/635-2019-p> [Data zvernennia 24 Veresen 2019], [in Ukrainian].

Nosenko, Yu. H. red., 2018. Suchasni zasoby IKT pidtrymky inkliuzyvnoho navchannia: navchalnyi posibnyk. Poltava: PUET *[Modern ICT tools to support inclusive learning: a manual]*. Poltava: PUET, [in Ukrainian].

Ministerstvo osvity i nauky Ukrainy [The Ministry of Education and Science of Ukraine], 2018. *Deiaki pytannia provedennia v 2019 rotsi zovnishnoho nezalezhnoho otsiniuvannia rezultativ navchannia, zdobutykh na osnovi povnoi zahalnoi serednoi osvity: nakaz M-va osvity i nauky Ukrainy vid 22.08.2018r. №931. [Some issues of external independent evaluation of learning outcomes based on complete general secondary education in 2019: Order of the Ministry of Education and Science of Ukraine from 22.08.2018].* [online] Dostupno: <https://mon.gov.ua/ua/npa/deyaki-pitannya-provedennya-v-2019-roci-zovnishnogo-nezalezhnogo-ocinyuvannya> [Data zvernennia 24 Veresen 2019], [in Ukrainian].

Osadcha, K. P., 2017. *Tiutorskyi suprovid navchannia matematyky zasobamy informatsiino-komunikatsiinykh tekhnolohii [Tutorial support of teaching mathematics by means of information and communication technologies]. Informatsiini tekhnolohii i zasoby navchannia [Information technology and training tools],* [online] 61(5). Dostupno: <https://www.researchgate.net/publication/326266154_Tutorskij_suprovid_navcanna_matematiki_zasobami_ informacijno-komunikacijnih_tehnologij> [Data zvernennia 24 Veresen 2019], [in Ukrainian].

Semerikov, S. O. ta Slovak, K. I., 2011. *Teoriia i metodyka zastosuvannia mobilnykh matematychnykh seredovyshch u protsesi navchannia vyshchoi matematyky studentiv ekonomichnykh spetsialnostei. Informatsiini tekhnolohii i zasoby navchannia [Theory and methodology of application of mobile mathematical environments in the process of teaching higher mathematic to students of economic specialties],* [online] 1 (21). Dostupno: <http://lib.iitta.gov.ua/106669/1/Teoriia%20ta%20metodyka%20zastosuvannia%20mobilnykh%20matematychnykh.pdf> [Data zvernennia 24 Veresen 2019], [in Ukrainian].

УДК 378:51]:376-056.24/.36:004

Використання платформи Classtime в умовах інклюзії

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Реферат.

Актуальність: необхідність забезпечення рівних прав та створення можливостей для навчання осіб із різними освітніми потребами на всіх освітніх рівнях, зокрема й у вищій освіті. Зазначено, що питання реалізації наступності освіти та безперервного навчання впродовж усього життя зумовлюють потребу в науковому, методичному і технічному забезпеченні освітнього процесу закладів вищої освіти в умовах інклюзії.

Мета: аналіз можливостей сучасного Інтернет-ресурсу – платформи Classtime, з точки зору адаптації процесу навчання математики до індивідуальних потреб і можливостей здобувачів вищої освіти в умовах інклюзії.

Методи: аналіз і синтез – з метою з'ясування стану та рівня розробленості досліджуваної проблеми; узагальнення – для формулювання висновків щодо врахування специфіки різних функціональних обмежень здобувачів вищої освіти та створення умов для реалізації їх індивідуальних освітніх траєкторій за рахунок використання сервісу Classtime.

Результати. На основі досвіду використання платформи Classtime визначено, що цей сервіс дає змогу підвищити якість математичної підготовки здобувачів вищої освіти в умовах інклюзії і має ряд переваг як для викладачів так і студентів. Ресурс відкриває широкі можливості для аналізу навчальної діяльності кожного студента, визначення необхідності додаткового поясненння та коригування дій з боку викладача залежно від реального стану опанування матеріалом. Доведено, що застосування платформи Classtime сприяє адаптації процесу навчання математики до особливих освітніх потреб та реалізації індивідуального підходу до всіх здобувачів вищої освіти за рахунок часткової компенсації функціональних обмежень, зумовлених певними захворюваннями. Наприклад, для осіб із вадами зору – можливість збільшення розміру тексту завдання до потрібних розмірів, для осіб з порушеннями слуху – максимальна візуалізація тесту, для осіб з порушеннями опорно-рухового апарату – можливість зосередити більше уваги на обдумуванні завдання, завдяки простоті вибору правильної відповіді та відсутності необхідності записувати її.

Висновки. Науково обґрунтоване та педагогічно доцільне використання сучасних Інтернет-ресурсів на основі врахування специфіки різних функціональних обмежень здобувачів вищої освіти, дасть їм змогу повноцінно включитися в освітній процес і створить умови для реалізації їхніх індивідуальних освітніх траєкторій. Перспективу має розроблення методики викладання математики в умовах інклюзії з використанням інформаційно-комунікаційних технологій і створення відповідного навчально-методичного забезпечення.

Ключові слова: *інформаційно-комунікаційні технології; Інтернет-ресурси; математична підготовка; вища освіта; інклюзивне навчання; індивідуальні потреби і можливості.*

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Part III

FOREIGN AND HISTORICAL ASPECTS OF VOCATIONAL EDUCATION AND TRAINING DEVELOPMENT

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A SCIENTIFIC PEDAGOGICAL ANALYSIS OF VOCATIONAL EDUCATION AND TRAINING REFORMS DURING THE EARLY YEARS OF UKRAINE'S INDEPENDENCE (1991-2000)

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Abstract.

Relevance. The paper focuses on the structural and content-related changes in the system of vocational education and training at the time of proclaiming Ukraine's independence. It also analyzes the impact of educational concepts, laws, decrees, state programmes and other regulatory documents adopted in the 1990s on this process.

The paper aims to study an essential pedagogical issue, that is the process of reforming vocational education and training in the first decade of Ukraine's independence in the context of enhancing its quality.

Research methods. The following scientific methods were used to achieve the research goal: definitive and logical analysis of scientific works – to summarize conceptual views on the training of skilled workers in vocational schools in the 1990s; analysis and synthesis of the legal framework – to explain the functioning of the vocational education and training system, to identify the mechanisms of legal regulation and areas of its reform in the late 20th century; study and analysis of the innovative experience in training skilled workers – to clarify social, economic, pedagogical and other factors in the modernization of professional (vocational) education today.

Results. The paper describes the organizational structure and effectiveness of vocational education and training management in the 1990s. It highlights the principles applied to shape the content of professional education in the light of technical and technological changes in the branches of the economy. Besides, it reveals the peculiarities of the educational process in vocational schools and specifies the requirements for applicants and professional competency of engineering educators. Next, it analyzes the economic prerequisites for the development of vocational education and training, as well as teaching and learning materials of professional training for future skilled workers. Finally, it studies the mechanisms for establishing relationships with employers and international partners and their impact on enhancing the quality of vocational education and training.

Conclusions. Socio-economic and political processes taking place at the beginning of Ukraine's independence significantly changed all spheres of public life. It also refers to the system of professional training of skilled workers for various branches of the economy and the service sector. Thus, it proves the relevance of applying such experience in the modernization of professional (vocational) education today.

Keywords: *Laws of Ukraine «On Education», «On Vocational Education and Training»; the State National Programme «Education»: Ukraine of the 21st Century»; the Concept of Professional Education of Ukraine; skilled workers; reform.*

Introduction. The economic downturn in Ukraine in the 1990s harmed the functioning of industrial enterprises and the service sector. It also adversely affected their forms of ownership, given that the number of private enterprises and institutions increased. It, in turn, exacerbated the issue of employment of graduates from professional schools and, subsequent-

ly, the enrollment of pupils in training for vocational professions. This situation required that industrial placement should take place at the premises of training workshops in professional schools. It reduced the quality of vocational education and training (hereinafter "VET") and also the adaptation of future skilled workers to professional requirements in industries. According to the author (2010, p. 102), however, it instead expanded the areas of training pupils for self-employment.

Between 1996 and 1998, certain factors negatively affected the functioning of vocational schools. The include under-financing of the educational sector, stringent centralization of management, the insufficient focus of VET on the labour market needs, narrow-focused training of skilled workers, a massive outflow of highly qualified engineering educators. It led to the need for specific structural and content-related changes in the VET system in order to adapt it to the interests and requirements of the individual, society and the national economy. During 1998 and 2000, it was essential to preserve vocational schools as many of them had been eliminated or merged with others. Indeed, the number of vocational schools had decreased by 284 since 1991 (for reference, 1251 – in 1991; 967 – in 2000). Accordingly, the number of pupils studying in these schools had gradually decreased, too. As of August 1, 2000, almost two hundred and thirty-five thousand pupils who graduated from vocational schools, which was 103.2 thousand less than in 1991. In general, the number of pupils amounted to 684.4 thousand in 1991, compared to 523.3 in 2000 (Developing the VET System during Socio-Economic Reforms, 1998, p. 64) *(see Fig. 1)*.

With this in mind, it was vital to elaborate new legislative and regulatory documents to support VET reforms in the first decade of Ukraine's independence. Their implementation helped to update the content of professional education, optimize the network of educational institutions, improve forms of management, increase the level of financial, personnel and methodological support, introduce some new mechanisms for enhancing the interaction between vocational schools and economic structures and the labour market on issues regarding training, retraining and advanced training of skilled workers. In this regard, it is essential to justify the areas in VET reforms in this period, as well as to study innovative experience and take it into account when updating the system of professional (vocational) education today.

Sources. The historical aspects of the establishment and development of the VET system in different periods of state formation are widely disclosed in the works of Ukrainian researchers. Such scholars as V. Hrechenko, O. Kokhanko, I. Likarchuk and L. Zelman studied the issues of managing systems of skilled workers' training. They also distinguished different periodization systems in the development of the VET system. Thus, I. Liakarchuk defined six periods of this system development, the last one referring to the early years of Ukraine's independence. He associates the 1991-98 period with the search for ways to reform the management of skilled workers' training and establish a new legal framework for the VET system management (1999, pp. 42-43). In turn, O. Kokhanko justified specific five periods of skilled

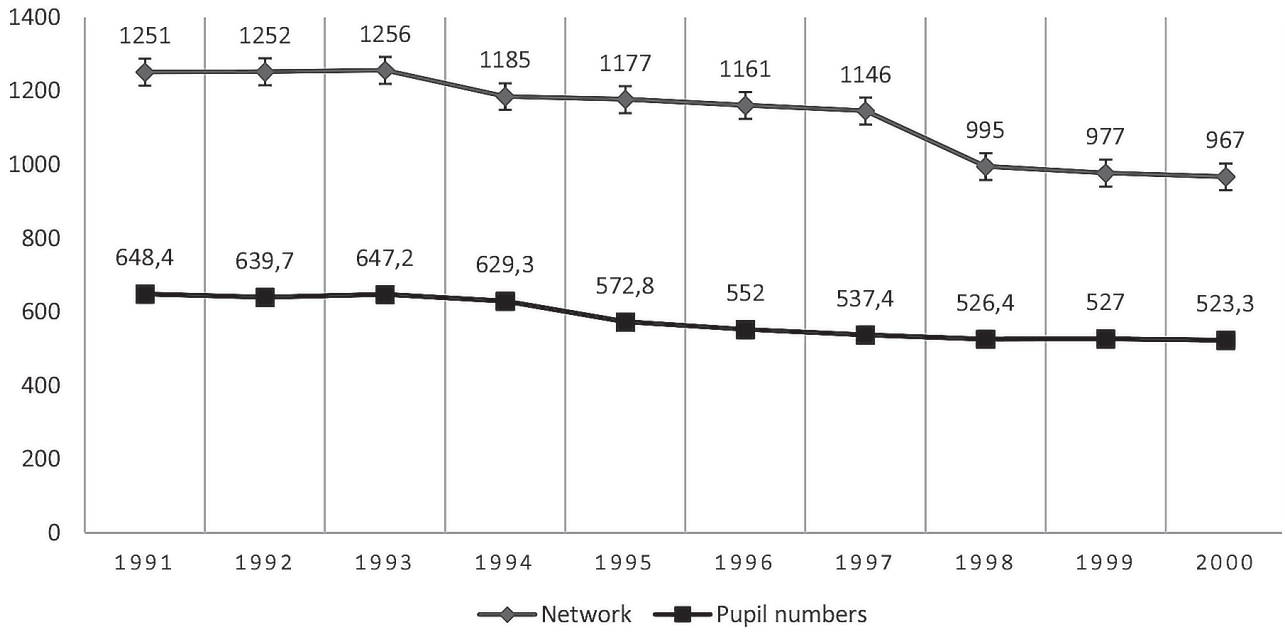

Fig. 1 The network and pupil numbers of vocational schools (between 1991 and 2000)

workers' training with secondary education during 1964 and 1994. The fifth one (1991-1994) is defined as a period of finding ways to reform the VET system, given the insufficient attention of the authorities to it (1995, pp. 11-15).

V. Hrechenko identified the four main periods of the VET system development in the history of an independent Ukraine, namely, the establishment period (1991-1996), the evolvement period (1997-2004), the post-revolutionary period (2005-2010), the modernization period (from 2011 up to now) (2011, pp. 9). L. Zelman also elaborated an approach to identifying the main periods of the VET development in an independent Ukraine (from 1991 up to now). The approach suggests the following: 1991-1997 – VET reforms in accordance with the needs of Ukraine; focus on the demands of society and the labour market; from 1998 up to now – improving the legal and methodological support of the VET system; optimizing the VET network and making it more service-oriented; facilitating the emergence of new, integrated professions in the service sector (2017, pp. 3).

Such researchers as V. Zaichuk (1995) and V. Radkevych (2010) analyzed the processes of establishing and developing systems of skilled workers' training for agriculture and folk handicrafts. Besides, N. Smolian (2012) studied how pupils managed to combine vocational training with productive labour between 1959 and 1991. Moreover, she justified how the interrelation between theoretical and industrial training based on intersubject links between the content of specialized, general technical, general educational subjects with that of industrial training might help to develop pupils' professional knowledge with their further use in production labour.

The main areas in VET reforms, including during the early years of Ukraine's independence, are reflected in the Concept of Professional Education of Ukraine (1991), the State National Programme "Education": Ukraine of the 21st Century" (1993), the Decree of the President of Ukraine "On the Main Areas in VET Reforms" (1996), Laws of Ukraine "On Education" (1991), "On Vocational Education and Training" (1998) and specific regulations, such as "On Education Qualification Levels "(1998), "On Vocational schools" (1999), "On Step-by-Step Vocational Education and Training" (1998). At the same time, the issues of structural and content-related changes in the VET system in the 1990s, especially in the context of reforming the national economy, have not been well determined. Therefore, the research topic, that is a scientific, pedagogical analysis of VET reforms during the early years of Ukraine's independence (1991-2000), has been proposed, given the relevant historical aspects of VET development and the importance of taking into account innovative ideas under the today's conditions of updating professional (vocational) education in accordance with the objectives of the Medium-Term Government Priority Action Plan up to 2021.

The paper **aims** to study the conceptual and regulatory framework of VET reforms during the early years of Ukraine's independence in the context of enhancing its quality.

Methods. The following scientific methods were used to achieve the research goal: definitive and logical analysis of scientific works – to summarize conceptual views on vocational training of skilled workers in the 1990s; analysis and synthesis of the legal framework – to explain the functioning of the VET system, to identify the mechanisms of legal regulation and areas of its reform in the late 20th century; study and analysis of the innovative experience in training skilled workers – to clarify social, economic, pedagogical and other factors in the modernization of professional (vocational) education today.

Results and discussion. The functioning of the VET system in the early 1990s is associated with the adoption of specific legislative and regulatory documents, which define VET as a priority area of socio-economic, spiritual and cultural development of society. According to the Law of Ukraine "On Education" (1991), the VET system should enable citizens to acquire a profession following their inclinations, interests, abilities, as well as retrain and upgrade their professional skills. Given the transition to a market economy, there is a need to train future skilled workers with a high level of professional knowledge, abilities, skills, as well as to educate socially active members of society, develop their scientific outlook, creative thinking, higher human qualities, national consciousness. Given this, the goals, objectives and principles of professional education development were specified in the Concept of Professional Education of Ukraine (1991).

The characteristics of activities of professional schools at that period include training and retraining regular labour force by government order based on direct contracts with enterprises, institutions, organizations, cooperatives, local and sectoral management bodies. It was facilitated by the functioning of the institute of the primary enterprise. The point is that professional schools had one or more primary enterprises (associations, organizations) which they provided with the regular labour force. In their turn, these enterprises provided professional schools with modern equipment and materials, organized industrial placement for pupils and internships for engineering educators, participated in the educational process, examination committees, vocational guidance. In re-

turn, the state provided tax exemptions, which helped to increase their interest in developing cooperation with professional schools and their responsibility for ensuring the VET quality. According to the Law of Ukraine "On Education" (1991), enterprises and other economic entities were entitled to establish institutions in which they could train skilled workers for their needs.

This period is characterized by a specific increase in the demand of employers for "do-everything" workers, which led to the need to determine the content of professional education on a wide polytechnic basis, taking into account the provisions of scientific principles and combining training with productive labour. It made it possible to develop pupils' comprehensive, occupational, professional and specialized knowledge, abilities, skills and creative experience during theoretical and industrial training. The content of humanities implied acquiring universal values. Also, pupils studied Ukrainian language and literature, history and geography of Ukraine. The content of natural science classes was differentiated according to educational levels and profiles. However, the content of these classes never repeated that of the classes taught in general secondary education. The content of general and specialized classes (a vocational cycle) was aimed at training multiskilled workers, depending on the complexity of professions.

Under educational legislation, a new system of continuing education was established during this period. It was based on the integration of educational structures, standardization, regionalization, humanization and humanization of education content. The activities of such structures were aimed at training future skilled workers for various sectors of the economy in the context of social demand. As determined by the provisions of the Concept of Professional Education of Ukraine (1991), the content of professional education should consist of three levels: *the initial level* (acquiring a qualification for work in one or more elementary professions under the conditions of the middle and senior grades of comprehensive schools and in production); *the intermediate level* (training for one or a group of complex professions based on the knowledge obtained in middle or high school, including the possibility of completing secondary education); *the advanced level* (training pupils for complex professions and qualifications of junior specialist based on the content of middle and high school education and secondary level of professional education). Therefore, the continuity of professional education was reflected in professional educational programmes through the content of theoretical and industrial training. According to the author (1995, pp. 4-5), such level-based training made it possible to select creative young people for a higher educational level according to some relevant criteria. Only those pupils who had good and excellent final grades, completed coursework and trial work, defended the diploma project, passed the final qualification exam, were transferred to the second year of the first level of vocational training.

Modular, differentiated and integrative approaches were used to select and build the content of professional education, as well as to develop curricula and programmes. It made it possible, on the one hand, to take into account the psycho-physiological characteristics of pupils, the level of their abilities, the complexity of professions, the periods of study. On the other hand, it allowed allocating more hours to an optional component of the content of professional education, namely, to study the latest production technologies and production processes and provide people with relevant services. During this period, professional schools were entitled to develop curricula and programmes independently. Subsequently, they needed to be approved by regional VET departments and the Ministry of Education of Ukraine (Developing the VET system, 1998, pp. 40). However, these curricula turned out to be not elaborated enough. As a result, it made it challenging to plan the industrial training process. Therefore, there appeared to be a need to develop standard curricula and programmes adapted to the needs of each vocational school.

The industrial training process combined theoretical and industrial training alternating every week. It facilitated the pupils' understanding of production processes during specialized classes, as well as encouraged them to apply this knowledge while producing useful products during practical classes. It ultimately helped to enhance the quality of their vocational training. The way how pupils organized their productive work in teams contributed to the effectiveness of their industrial training activities in professional schools. This form of industrial training allowed using all elements of self-financing with the actual involvement of teams in industrial relations (Kontseptsiia profesiinoi osvity Ukrainy, 1992).

In professional schools, the educational process was based on democracy, civil rights and freedoms, taking into account the self-government of pupils, mutual trust, respect and responsibility for the common cause, as well as for the well-being of each individual. Amateur-talent groups, technical creativity and innovatory clubs organized different extracurricular activities for pupils. Practical psychologists provided psychological support for the educational process. The activities of practical psychologists followed the Regulation on Psychological Services in the Education System of Ukraine (1993). Social educators fa-

cilitated the interaction between professional schools and the participants in the educational process and also provided pedagogical patronage. The Ministry of Education of Ukraine and other authorities put much priority on free medical care and nutrition of pupils in professional schools. Taking into account the provisions of the Law, they were provided with state financial support not lower than the cost of living. They enjoyed all the described benefits, work-study and other facilities of educational institutions (On Education, 1999).

The content and forms in vocational guidance of the youth and the unemployed varied to help them choose their future profession. For this purpose, vocational guidance offices were established within professional schools and at the enterprises. They summarized information on vocational professions and organized interviews and various activities related to career guidance. The Inter-Sectoral Council on Vocational Guidance, which functioned on a public basis under the Ministry of Social Policy of Ukraine with the participation of the Ministry of Education of Ukraine and the Ministry of Youth and Sport of Ukraine, played an essential role in improving career guidance at the national level.

Besides, engineering educators contributed much to vocational training of future skilled workers. Indeed, they acted as both teachers and masters of vocational training. Usually, they were graduates from engineering and pedagogical institutes or specialized faculties of universities. Industry experts with relevant working skills were also involved in educational work. Workplace relations between engineering educators and the administration of professional schools were based on competitive admissions, as well as under agreements and contracts.

Relevant bodies at the republican and local levels performed administrative functions in the field of VET. They, within their capacity, assisted professional schools in fulfilling their contractual obligations, provided the VET system with scientific and methodological support, supervised the implementation of advanced training technologies and the certification of professional schools. However, the lack of central and regional methodological services in the VET system negatively affected the quality of educational and methodological support of vocational training of skilled workers and planning of methodological work for pedagogical teams in professional schools. In September 1993, the Cabinet of Ministers of Ukraine approved the resolution "On Approval of the Regulations on Professional schools in Ukraine" to clarify the goals and objectives of professional schools in the VET system.

The mechanisms for reforming the VET system set out in the State National Programme "Education": Ukraine of the 21st Century" (1993) were aimed at enhancing the quality of vocational training of skilled workers in the first decade of Ukraine's independence. They are the following: optimizing the network of professional schools, developing a new list of professions; introducing integrated professions; updating the content of professional education, defining state requirements for its quality and scope at the level of scientific and technological advances and world experience, using modern pedagogical and industrial technologies, introducing an effective system of vocational guidance and professional selection of young people for gaining vocational professions. Given this, VET reforms led to the establishment of new types of professional schools, including higher professional schools, vocational lyceums, vocational training centres, where pupils were able to obtain vocational qualifications. The activities of these institutions differed in the content of the basic tasks and functions, which they fulfilled under the current and prospective needs of the national economy in skilled and competitive workers.

The number of educational and scientific complexes, which included the most leading professional schools as separate educational units of universities, increased. It made it possible to introduce comprehensive curricula to shorten the training period for future graduates. The links between professional schools and general education institutions were strengthened. In turn, it expanded the comprehensive component of the training of future skilled workers based on the fundamentalization of education. Language policy played an essential role in this process, too. It was particularly the case when future skilled workers started to be trained under in Ukrainian-language curricula.

The interaction between professional schools and the State Employment Service of Ukraine regarding vocational training, retraining and advanced training of dismissed workers and other categories of unemployed population expanded on a contractual basis. This activity took into account the principles and features of structure and management of vocational training of the unemployed population and its scientific, educational, methodological and financial support, grounded in the Concept of Training, Retraining and Advanced Training of the Unemployed Population (1996).

The scope of vocational training for unemployed people in professional schools increased in the context of implementing the Employment Programme for 1997-2000 (1996). It envisaged the implementation of measures aimed at ensuring productive employment of the population, involving unemployed citizens in economically viable activities, as well as social protection of the non-competitive population. Professional schools also widely used modular tech-

nologies in vocational training for the unemployed population. These technologies were created while implementing the international project "The Practical Application of Flexible Modular Programmes to Train the Unemployed" sponsored by the UN Development Programme and International Labour Organization. Vocational training of future skilled workers was also modular-based since teachers of professional schools developed modular educational elements for this purpose.

However, the changes in the society associated with the emergence of a market economy caused the need to continue VET reforms during 1996 and 2000. The content of these reforms was determined by the Decree of the President of Ukraine "On the Main Areas in VET Reforms" (1996). First and foremost, they highlighted the importance of updating the VET content, introducing multiskilled professions, developing state standards, enhancing the quality of the VET system, implementing computer-based literacy training. The characteristics of VET reforms in this period include optimizing the network of educational institutions renamed into vocational schools. Subsequently, this name was regulated according to Art. 41 of the Law of Ukraine "On Education" (1996). The need for human resourcing Ukraine's economy resulted in some changes in the structure of training and new types of vocational schools, including higher professional schools, farmer field schools. It also made it possible to introduce new mechanisms of management, create relevant structures for scientific and methodological support of the VET system and develop new mechanisms for the interaction with employers. Still, the implementation of the main areas in VET reforms led to a 10% reduction in government order for training skilled workers, the reorganization of over 120 vocational schools and the elimination of the other 25 ones.

In 1997, they began to create relevant state standards to promote a uniform state policy in the VET system. However, this activity was hampered by the lack of professional standards. For this purpose, two education qualification levels were identified to improve the vocational training of future skilled professionals. They are skilled worker (a worker who acquired specialized skills and knowledge based on complete or basic secondary education and possesses appropriate experience in applying them to solve professional problems in a particular sector of the economy) and junior specialist (a specialist who obtained general cultural training, specialized skills and knowledge based on complete secondary education and possesses some experience in applying them to solve typical professional tasks envisaged for relevant positions in a particular sector of the economy) (Regulations on Education Qualification Levels, January, pp. 70-71). Related professional educational programmes were applied to implement vocational training based on the specified levels. The characteristics of these reforms also include improving human resourcing, scientific, educational, methodological, financial and technological support of the VET system. Vocational schools were entitled to provide paid services, including training skilled workers for different professions above the state quota, offering a second qualification of junior specialist, training and retraining workers and specialists based on the order of employment services; organizing clubs, courses and seminars on a paid basis (On the Approval of Paid Services Provided by Public Educational Institutions, February 1997).

After adopting the Law of Ukraine "On Vocational Education" in 1998, the destructive processes in this field were suspended, and a new stage of defining the state policy on its development began. In this regard, the main objectives of VET in the new environment were the following: to meet the needs of Ukraine's economy for skilled and competitive workers in the labour market; to assist in implementing the state employment policy; to provide the necessary conditions for developing educational institutions of different types, profiles, forms of ownership and subordination. Under Art. 17-18 of this Law, the name of vocational education school was replaced with vocational education school.

The Inter-Sectoral VET Council played an essential role in VET reforms during this period. As determined by the Regulations on Its Establishment (1998, p. 142), it was the coordinating body for defining and implementing state policy in this educational sub-system. The main objectives of the Inter-Sectoral VET Council were to promote VET in Ukraine, to generalize the practice of applying laws and other legal acts in the VET field, to analyze the conditions for developing labour potential of the country, to prepare proposals for improving the mechanisms of economic regulation of VET development.

In 1998, they developed and approved the Provisional State List of Professions for Training Skilled Workers in Vocational education schools. It took into account structural changes in the economy, as well as the need to broaden the profiles of training and employment areas for graduates from vocational education schools and strengthen their social protection. This legal instrument encompassed the professions and appropriate specializations, which reflected the needs of the economy in training skilled workers (1998).

One could observe an increasing interest in the establishment of a new type of vocational education school after the adoption of the resolution "On Approval of Comprehensive Measures for Reforming Step-by-Step Vocational Education and Training, Spe-

cializations and Reprofiling of Vocational education schools" by the Cabinet of Ministers of Ukraine in 1998. The implementation of these measures aimed to ensure professional self-realization of the individual, restore and enhance the quality of production potential under the requirements of the labour market. Given this, the number of multidisciplinary vocational education schools, which trained skilled workers for complex technological and service professions, increased. According to research findings, this trend was driven by the economic downturn in which vocational education schools found themselves. It refers, on the one hand, to the need to survive through providing educational services to the population on a paid basis and, on the other hand, the needs of labour markets in specific regions and pupils' living with their parents (Vocational Education and Training of Ukraine: the 20th century).

The Regulation on the organization of industrial training process in vocational education schools (1998) defined the procedures of planning and organizing the industrial training process, supervising work-study activities, assessing pupils' knowledge, skills and qualifications. All organizational, pedagogical, methodological and technical measures were implemented under the requirements of VET state standards and perspective plans on work of pedagogical teams for the academic year. The structure of the industrial training process encompassed training in natural sciences, math, humanities, as well as general technical, vocational theoretical and practical training, physical education and extra-curricular activities. Its implementation took into account the provisions of general didactic principles, systematic and cultural approaches to ensuring pedagogical interaction between the participants in the industrial training process (On Approval of the Regulation on the Organization of the Industrial Training Process in Vocational education schools, May, 1998). However, the requirements for pedagogical staff in vocational education schools tightened. It mostly relates to the fact that they needed to have adequate vocational education and professional qualification, as well as moral qualities and proper physical condition that would entitle them to fulfil the duties of a pedagogical employee. Particular attention was paid to their knowledge and skills to teach the adult population.

Over 20 legal acts were developed to implement the provisions of the Law of Ukraine "On Vocational Education and Training". They include the Regulation on Vocational education schools (August 5, 1998, pp. 145), which was of great importance. In this document, a vocational education school is defined as an educational institution that helps to meet the needs of citizens in obtaining vocational professions, specialties, qualifications according to their interests, abilities, health, as well as the needs of the country's economy for skilled and competitive workers in the labour market. Higher professional schools, higher art professional schools, farmer field schools, higher farmer field schools, vocational training centres were the most popular among pupils. It must be noted that there were almost no significant differences between the content of activities of higher professional schools and vocational training centres. According to the Regulation on Higher Professional schools and Vocational Training Centres (2000), they differed only in the main functions. Higher professional schools trained highly skilled workers with qualifications in complex technological, scientific professions and specialties, whereas vocational training centres provided retraining and advanced training for the actual workers and junior specialists related to introducing the latest production technologies or services, developing the necessary knowledge of economy, organization and management and computer literacy.

The search for alternative sources of funding prompted vocational education schools, especially their new types (higher professional schools, vocational training centres, farmer field schools), to establish new industrial training enterprises, farms, commercial structures, cooperatives, which produced and sold industrial and agricultural products, provided services to the population. Ten per cent of the money earned was included into salaries of masters of vocational training, senior masters, headmasters of vocational education schools and their deputies. It helped to increase their motivation to organize this type of industrial training. Pupils received 50% of the total amount of the money earned. The rest of the funds was spent on the modernization of facilities in vocational education schools. Production structures at the premises of vocational education schools were developed due to the broad rights of their leaders on financial and economic activities, as well as the use of appropriations, approval of staffing lists and estimates.

According to the Regulation on Step-by-Step Vocational Education and Training, three stages of VET were established (June 1999, pp. 158-159). The VET structure covered training in natural sciences, math, humanities, as well as general technical, vocational theoretical and practical training. Theoretical classes were usually conducted in classrooms and laboratories in the form of lectures, lessons, seminars, laboratory workshops, educational trips. Practical classes were organized in production workshops, educational farms, combining training with the production of useful products, provision of services. To this end, the content of professional education has always been updated following the requirements of technological changes in production, state standards in the field of VET, qualifications of graduates from vocational ed-

ucation schools, necessary compulsory training aids and educational levels of entrants.

The educational and methodological support for the functioning of vocational education schools was provided, first of all, by regional educational and methodological centres (offices) in the field of VET. According to the Regulation approved by the decree of the Ministry of Education of Ukraine in 1998, they were entitled to analyze the conditions of educational work in vocational education schools, organize research activities there, as well as study and implement advanced pedagogical and industrial experience, hold scientific and practical conferences, exhibitions of educational and methodological literature, organize advanced training and internships for engineering educators in the VET system (The Regulation on the Republican (Autonomous Republic of Crimea), Regional, Kyiv and Sevastopol City Vocational Training Centre, July 2007).

Conclusions. Thus, one can conclude that the functioning of the VET system in the first decade of Ukraine's independence is associated with the measures for preserving and reforming the VET system under the conditions of the transition to a market economy. In the early 1990s, more than a quarter of a million skilled workers trained for industrial production and the service sector graduated from vocational education schools annually. However, the downturn in Ukraine's economic development and the suspension of the activities of many industrial enterprises harmed the functioning of the VET system. It refers to a significant reduction of places for industrial placement and employment of graduates from vocational education schools, underfunding, disconnection from sources of energy and heat supply and communication, the outflow of highly qualified teachers due to low salaries, outdated facilities. All this negatively affected the credibility of vocational professions among young people and adults.

In turn, this caused the need for structural and content-related changes in the system of professional training of skilled workers. Therefore, the implementation of state policy in this area included, above all, optimizing the network and the opening of new types of educational institutions, improving the content of professional education, introducing training for integrated professions, developing a new list of professions, state standards, using modern pedagogical and industrial technologies.

The implementation of the provisions of the Concept of Professional Education of Ukraine (1991) played an essential role in improving the VET system in the 1990s. It regarded professional education as an integral part of the national economic complex and the system of continuing education which was aimed at training and retraining workers, ensuring social protection of youth and professional and spiritual development of personality under the conditions of social, cultural and economic revival of Ukraine. This Concept introduced (initial, intermediate and advanced) three levels of the VET system. Subsequently, this phenomenon was called the step-by-step VET system, which was implemented in vocational education schools based on professional educational programmes.

The Law of Ukraine "On Education" (1991) and the State National Programme "Education: Ukraine of the 21st Century" (1993) include strategic objectives as for reforming the VET system to meet national and regional needs for skilled workers who can be competitive in terms of market relations. In 1996, the Presidential Decree identified the ten significant areas in VET reforms which contributed to the further development of the VET system. They imply creating an appropriate legal framework for the VET system; introducing training in multiskilled professions; developing multi-faceted vocational education schools; improving forms of management and making them more democratic; implementing the State Employment Programme; providing financial, technological, scientific, educational and methodical support of the VET system.

The first legislative act in this area became the Law of Ukraine "On Vocational Education and Training" (1998). Its adoption resulted in effective reforms in the VET system. Subsequently, certain critical legal acts were developed, taking into account the final provisions of this Law. It positively affected the development of the legal field in the functioning of the VET system in the late 20th century. Given this, the content of professional education began to be updated more actively; the state requirements for ensuring its quality and scope were defined; the network optimization was promoted; the types of vocational education schools were varied based on professional orientation.

Despite the crisis in the society and economy, which occurred during the years of Ukraine's early independence, the VET system took relevant measures that contributed to its preservation and further improvement to meet the needs of the individual, society and the state. Therefore, it is expedient to take into account the innovative experience in reforming the VET system in the 1990s while updating the system of professional (vocational) education at the national, regional levels, as well as at the level of professional (vocational) education schools.

At the national level, it is important to develop new legislative and regulatory documents to support structural and content-related changes in the field of professional (vocational) education in the context of the objectives of the Midium-Term Government Priority Action Plan up to 2021 and the provisions of the

Sustainable Development Strategy "Ukraine – 2030"; to introduce the financing of professional (vocational) education from the state budget as the main source of financing of educational activities, material and technical and social development of professional (vocational) education schools, financial support of pupils, whose amount is determined differentially according to scientifically grounded standards; to exempt state professional (vocational) education schools from taxes for the provision of educational and other services on a paid basis and production activities; to create new vocational professions in accordance with socio-economic and cultural and educational needs; to define state requirements for quality assurance of professional (vocational) education; to establish systematic activities of the Inter-Sectoral Council of Professional (Vocational) Education; to strengthen the fundamentalisation of professional theoretical training and increase the training period for high-tech professions; to provide pedagogical staff of professional (vocational) education schools with targeted financial support of their professional development in accordance with the "money goes after the teacher" principle; to create new types and forms of ownership of professional (vocational) education schools, such as a professional college with multilevel training of skilled workers, as well as the legal framework necessary for their successful functioning; to enhance the quality of training of pedagogical staff for the system of professional (vocational) education by involving the best graduates from professional (vocational) education schools in the training; to introduce targeted state-funded educational and scientific programmes for creative pedagogues from professional (vocational) education schools so that they can obtain doctoral degrees (e.g., PhD).

At the regional level, the following steps can facilitate the modernization of professional (vocational) education: to introduce modern mechanisms for the decentralized management of professional (vocational) education; to strengthen systematic activities of regional councils of professional (vocational) education; to create a practical career guidance and career counseling programme for young people and adults; to intensify activities of local executive authorities in regulating social and labour relations, developing social partnership in the field of professional (vocational) education, creating relevant conditions for providing free medical care and nutrition of pupils in professional (vocational) education schools; to provide high-quality educational and methodological support for professional training of future skilled workers.

At the level of professional (vocational) education schools, it is vital to do as follows: to expand autonomous rights in resolving personnel, organizational, financial and other issues; to introduce a differentiated system of remuneration, taking into account the level of professional competency and the results of personal work of pedagogical staff; to update the content of professional education taking into account dynamic technical and technological changes in the fields of industrial and agricultural production and the service sector, as well as modern and perspective needs and requirements of the labour market for its quality; to train future skilled workers for entrepreneurial activities; to ensure the interaction with schools, higher and further education and the state employment service; to combine different forms of educational work based on humanistic understanding of the individual's inner, taking into account age, psychological and physiological characteristics; to introduce specialization in high schools; to apply innovative technologies, forms and methods of professional training and evaluation of learning outcomes; to create an information and educational environment; to motivate pedagogical staff to participate in research activities and conduct innovative educational activities; to ensure the functioning of schools of pedagogical mastery and develop professional culture of pedagogues; to organize internships of pedagogical staff at high-tech enterprises; to co-finance professional (vocational) education with other educational institutions, including those in cluster associations; to develop a public-private partnership using project management technologies; to improve digital competency of pedagogical staff; to expand the areas and scope of retraining of the unemployed population.

Further research should study the documents which confirm the processes of VET modernization in an independent Ukraine. They are the provisions of the Concept of Vocational Education and Training Development, transcripts of Parliamentary hearings, minutes of the meetings of the Verkhovna Rada of Ukraine Committee on Science and Education, proceedings of the 2nd All-Ukrainian Congress of Education Workers, collegial bodies of the Ministry of Education and Science of Ukraine, resolutions of the Cabinet of Ministers of Ukraine, national strategies, state target programmes, the White Book of the National Education of Ukraine, the National Report on the status and prospects of education in Ukraine.

List of referenses

Верховна Рада України. Законодавство України, 1996. *Про Концепцію професійної підготовки та підвищення кваліфікації незайнятого населення. Постанова Кабінету Міністрів від 1 лютого 1996 року № 150.* [online] (Останнє оновлення 1 Лютий 1996) Доступно: <https://zakon.rada.gov.ua/laws/show/150-96-%D0%BF> [Дата звернення 5 Вересень 2019].

Верховна Рада України. Законодавство України, 1996. *Про основні напрями реформування професійно-технічної освіти в Україні. Указ Президента України від 20 грудня 2013 року № 698/2013 (втрата чинності).* [online] (Останнє оновлення 20 грудня 2013) Доступно: <https://zakon.rada.gov.ua/laws/show/322/96> [Дата звернення 1 Вересень 2019].

Верховна Рада України. Законодавство України, 1998. *Про професійну (професійно-технічну) освіту. Закон України від 10 лютого 1998 року.* [online] (Останнє оновлення 1 Січень 2019) Доступно: <https://zakon.rada.gov.ua/laws/show/103/98-вр/ed19980210> [Дата звернення 5 Вереснь 2019]

Греченко, В., 2011. Етапи державотворення незалежної України (1991-2001). *Вісник Харківського національного університету внутрішніх справ,* 2(53), с.11-19.

Державна національна програма «Освіта». Україна XXI століття, 1994. Київ: Райдуга.

Зайчук, В., 1997. *Проблеми підготовки кадрів у профтехучилищах сільськогосподарсього профілю в Україні (1969-1995 рр.).* Київ: Генеза.

Зельман, Л., 2017. *Підготовка кваліфікованих робітників сфери обслуговування у професійно-технічних навчальних закладах України (1969. – початок XXI століття).* Кандидат наук. Львівський державний інститут безпеки життєдіяльності.

Концепція професійної освіти України, 1992. В Н. Г. Ничкало, ред. *Педагогічна книга майстра виробничого навчання.* Київ: Вища школа.

Коханко, О., 1995. *Становлення і розвиток підготовки кваліфікованих робітничих кадрів з середньою освітою в Україні (1969-1994 рр.).* Кандидат наук. Інститут педагогіки і психології професійної освіти АПН України.

Положення про освітньо-кваліфікаційні рівні, 2007. Київ: Форум.

Лікарчук, І.Л., 1996. *Проблеми підготовки робітничих кадрів в Україні (1920-1929 рр.).* Київ: Інститут педагогіки і психології професійної освіти АПН України.

Лікарчук, І.Л. 1999.*Управління системами підготовки кваліфікованих робітників в Україні: педагогічний аспект (1888-1998 роки).* Доктор наук. Інститут педагогіки і психології професійної освіти АПН України.

Положення про ступеневу професійно-технічну освіту, 2007. Київ: Форум.

Про затвердження Положення про професійно-технічний навчальний заклад, 2007. Київ: Форум.

Про затвердження Положення про Республіканський (Автономна Республіка Крим), обласний, Київський та Севастопольський міський навчально-методичний центр професійно-технічної освіти, 2007. Київ: Форум.

Про освіту, 1999. Київ: Асоціація «Укркомунквалiфкадри».

Про створення Міжгалузевої ради з професійно-технічної освіти, 2007. Київ: Форум.

Профтехосвіта України: XX століття, 2004. Київ: АртЕк

Радкевич, В., 1995. *Програмно-методичні матеріали для рівневої підготовки вишивальниць.* Київ: Вища школа.

Радкевич, В., 2010. *Теоретичні і методичні засади професійного навчання у закладах профтехосвіти художнього профілю.* Київ: УкрІНТЕІ.

Смоляна, Н.В., 2012. *Поєднання професійного навчання з виробничою працею в закладах професійно-технічної освіти України (1959-1991 рр.).* Кандидат наук. Інститут професійно-технічної освіти НАПН України.

Стан і перспективи розвитку професійно-технічної освіти в Україні, 2003. Київ: Парламентське видавництво.

Bazyl, L. O., Shatkovska, H. I., Klymenko, M. M., and Radkevych, V. O., 2019. Psychological and pedagogical features of the career growth of vocational education's teachers. *Opcion*, 35 (Special Issue 23), 763-779.

Translated & Transliterated

Verkhovna Rada Ukrainy. Zakonodavstvo Ukrainy, 1996. *Pro Kontseptsiiu profesiinoi pidhotovky ta pidvyshchennia kvalifikatsii nezainiatoho naselennia. Postanova Kabinetu Ministriv vid 1 liutoho 1996 roku № 150 [About the Concept of vocational training and Certification training of unemployed people].* [online] (Ostannie onovlennia 1 Liutyi 1996) Dostupno: <https://zakon.rada.gov.ua/laws/show/150-96-%D0%BF> [Data zvernennia 5 Veresen 2019], [in Ukrainian].

Verkhovna Rada Ukrainy. Zakonodavstvo Ukrainy, 1996. *Pro osnovni napriamy reformuvannia profesiino-tekhnichnoi osvity v Ukraini. Ukaz Prezydenta Ukrainy vid 20 hrudnia 2013 roku № 698/2013 (vtrata chynnosti) [About the main directions of reforming vocational education in Ukraine].* [online] (Ostannie onovlennia 20 hrudnia 2013) Dostupno: <https://zakon.rada.gov.ua/laws/show/322/96> [Data zvernennia 1 Veresen 2019], [in Ukrainian].

Verkhovna Rada Ukrainy. Zakonodavstvo Ukrainy, 1998. *Pro profesiinu (profesiino-tekhnichnu) osvitu. Zakon Ukrainy vid 10 liutoho 1998 roku [About professional (vocational) education].* [online] (Ostannie onovlennia 1 Sichen 2019) Dostupno: <https://zakon.rada.gov.ua/laws/show/103/98-vr/ed19980210> [Data zvernennia 5 Veresn 2019], [in Ukrainian].

Hrechenko, V., 2011. Etapy derzhavotvorennia nezalezhnoi Ukrainy (1991-2001) *[Stages of state formation of independent Ukraine]. Visnyk Kharkivskoho natsionalnoho universytetu vnutrishnikh sprav*, 2(53), s.11-19, [in Ukrainian].

Derzhavna natsionalna prohrama «Osvita». [State National Program «Education».] Ukraina XXI stolittia, 1994. Kyiv: Raiduha, *[in Ukrainian].*

Zaichuk, V., 1997. *Problemy pidhotovky kadriv u proftekhuchylyshchakh silskohospodarsho profiliu v Ukraini (1969-1995 rr.) [Problems of training in agricultural vocational schools in Ukraine].* Kyiv: Heneza, [in Ukrainian].

Zelman, L., 2017. *Pidhotovka kvalifikovanykh robitnykiv sfery obsluhovuvannia u profesiino-tekhnichnykh navchalnykh zakladakh Ukrainy (1969. – pochatok XXI stolittia) [The training of skilled workers in the service sector in technical and vocational educational institutions of Ukraine]*. Kandydat nauk. Lvivskyi derzhavnyi instytut bezpeky zhyttiediialnosti, [in Ukrainian].

Kontseptsiia profesiinoi osvity Ukrainy, 1992. V: N. H. Nychkalo, red. *Pedahohichna knyha maistra vyrobnychoho navchannia [Vocational education concept of Ukraine]*. Kyiv: Vyshcha shkola, [in Ukrainian].

Kokhanko, O., 1995. *Stanovlennia i rozvytok pidhotovky kvalifikovanykh robitnychykh kadriv z serednoiu osvitoiu v Ukraini (1969-1994 rr.) [The establishment and development of training skilled workers with secondary education in Ukraine]*. Kandydat nauk. Instytut pedahohiky i psykholohii profesiinoi osvity APN Ukrainy, [in Ukrainian].

Likarchuk I.L., 1996. *Problemy pidhotovky robitnychykh kadriv v Ukraini (1920-1929 rr.) [Problems of workers training in Ukraine]*. Kyiv: Instytut pedahohiky i psykholohii profesiinoi osvity APN Ukrainy, [in Ukrainian].

Likarchuk I.L., 1999. *Upravlinnia systemamy pidhotovky kvalifikovanykh robitnykiv v Ukraini: pedahohichnyi aspekt (1888-1998 roky) [Management of qualification worker training systems in Ukraine: pedagogical aspect]*. Doktor nauk. Instytut pedahohiky i psykholohii profesiinoi osvity APN Ukrainy, [in Ukrainian].

Polozhennia pro osvitno-kvalifikatsiini rivni [Regulations on educational qualification levels], 2007. Kyiv: Forum, [in Ukrainian].

Polozhennia pro stupenevu profesiino-tekhnichnu osvitu [Regulations on stepwise vocational education], 2007. Kyiv: Forum, [in Ukrainian].

Pro zatverdzhennia Polozhennia pro Respublikanskyi (Avtonomna Respublika Krym), oblasnyi, Kyivskyi ta Sevastopolskyi miskyi navchalno-metodychnyi tsentr profesiino-tekhnichnoi osvity [On approval of the Regulations on the Republican (Autonomous Republic of Crimea), regional, Kyiv and Sevastopol city educational and methodical center of vocational education], 2007. Kyiv: Forum, [in Ukrainian].

Pro zatverdzhennia Polozhennia pro profesiino-tekhnichnyi navchalnyi zaklad [On approval of the Regulations on vocational education school], 2007. Kyiv: Forum, [in Ukrainian].

Pro osvitu [About education], 1999. Kyiv: Asotsiatsiia «Ukrkomunkvalifkadry», [in Ukrainian].

Pro stvorennia Mizhhaluzevoi rady z profesiino-tekhnichnoi osvity [On the formation of the Inter-branch Council for Vocational Education], 2007. Kyiv: Forum, [in Ukrainian].

Proftekhosvita Ukrainy: XX stolittia [Vocational education of Ukraine: XX century], 2004. Kyiv: ArtEk, [in Ukrainian].

Radkevych, V., 1995. *Prohramno-metodychni materialy dlia rivnevoi pidhotovky vyshyvalnyts [Program-methodical materials for the level preparation of embroideries]*. Kyiv: Vyshcha shkola, [in Ukrainian].

Radkevych, V., 2010. *Teoretychni i metodychni zasady profesiinoho navchannia u zakladakh proftekhosvity khudozhnoho profiliu [Theoretical and methodological foundations of professional training in vocational education institutions of art profile]*. Kyiv: UkrINTEI, [in Ukrainian].

Smoliana, N.V., 2012. *Poiednannia profesiinoho navchannia z vyrobnychoiu pratseiu v zakladakh profesiino-tekhnichnoi osvity Ukrainy (1959-1991 rr.) [Combining vocational training with industrial work in vocational education institutions of Ukraine]*. Kandydat nauk. Instytut profesiino-tekhnichnoi osvity NAPN Ukrainy, [in Ukrainian].

Stan i perspektyvy rozvytku profesiino-tekhnichnoi osvity v Ukraini [Status and prospects of development of vocational education in Ukraine], 2003. Kyiv: Parlamentske vydavnytstvo, [in Ukrainian].

Bazyl, L. O., Shatkovska, H. I., Klymenko, M. M., and Radkevych, V. O., 2019. Psychological and pedagogical features of the career growth of vocational education's teachers. *Opcion*, 35 (Special Issue 23), 763-779, [in English].

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Науково-педагогічний аналіз реформування професійно-технічної освіти на початку незалежності української держави (1991-2000 рр.)

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Реферат

Актуальність: у статті акцентується проблема структурно-змістових змін у системі професійно-технічної освіти (ПТО) в період утвердження незалежності України та вплив на цей процес створених у 90-х роках ХХ ст. освітніх концепцій, законів, указів, державних програм та інших нормативно-правових документів.

Метою статті є дослідження реформування професійно-технічної освіти в період першого десятиліття незалежності Української держави.

Методи: загальнонаукові (дефінітивний і логічний аналіз наукових праць – для узагальнення концептуальних ідей підготовки кваліфікованих робітників у закладах ПТО в 90-х роках ХХ ст.); аналіз, синтез нормативно-правової бази (для з'ясування стану функціонування системи ПТО, виявлення механізмів правового регулювання та напрямів її реформування наприкінці ХХ ст.); вивчення та аналіз прогресивного досвіду підготовки кваліфікованих

робітників (для уточнення соціальних, економічних, педагогічних тощо чинників модернізації системи професійної (професійно-технічної) освіти П(ПТ)О в сучасних умовах).

Результати: охарактеризовано стан організаційної структури та ефективність управління ПТО в 90-х роках ХХ ст.; висвітлено принципи, що застосовувалися у процесі формування змісту професійної освіти з урахуванням техніко-технологічних змін у галузях економіки; розкрито особливості організації навчально-виховного процесу в закладах профтехосвіти; з'ясовано вимоги до абітурієнтів і професійної компетентності інженерно-педагогічних працівників; проаналізовано економічні передумови розвитку системи ПТО, навчально-методичне забезпечення професійної підготовки майбутніх кваліфікованих фахівців; досліджено механізми налагодження зв'язків із роботодавцями та міжнародними партнерами і їхній уплив на підвищення якості ПТО.

Висновки: під упливом соціально-економічних і політичних процесів, що відбувалися в Україні на початку її незалежності, зафіксовано значні зміни в усіх сферах суспільного життя, в тому числі й у системі професійної підготовки кваліфікованих робітників для різних галузей економіки та сфери обслуговування, що актуалізує значущість урахування цього досвіду в модернізації П(ПТ)О в сучасних умовах.

Ключові слова: *Закони України «Про освіту», «Про професійно-технічну освіту»; Державна національна програма «Освіта»: Україна XXI століття»; Концепція професійної освіти України; кваліфіковані робітники; реформування.*

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THE EXPERIENCE OF THE PEOPLE'S REPUBLIC OF CHINA IN THE DETERMINATION OF THE RESULTS OF PROFESSIONAL TRAINING OF BACHELORS OF BUSINESS ECONOMICS

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Abstract.

Relevance. In the times of economic transformation on the way to the market relations, Ukraine needs highly qualified economists who have high qualification for working in both domestic and international economies. That is why currently one of the priorities of the vocational education system is to educate the competitive specialist who has a high level of professional competence. Analysis of literature suggests that the problem of the formation of professional competence of the future specialists has always interested the scientists, but because of the modernization of the educational system of our country it has acquired particular relevance.

The article aim is to identify and characterize the features of determining the results of training of the future economists on the example of the state university in China.

Methods: The research methods used during the study are:

– theoretical methods: analysis (to study the educational and professional program of the state Chinese University and determine the results of training of future Bachelors majoring in Business Economics in Chinese universities), comparison (to identify the positive features of the formation of the professional competence of future Bachelors in China's business economy), generalization (to formulate conclusions and recommendations for applying the results of training of Bachelors of Business Economics in Ukrainian education).

– empirical methods: observational (direct observation of the educational process at a state university in the People's Republic of China) – to determine the specific features of determining and studying the results of a professional training of Bachelors of Business Economics at a Chinese university.

Results. The article outlines and describes the specific features of determination of the results of the training of future Bachelors majoring in Business Economics which have been given and analyzed on the example of the university in China. The structure of the professional competence of future Bachelors of Business Economics is considered in accordance with the educational and professional program of Chinese University. Positive characteristics of the formation of the professional competence of future Bachelors in China's business economy are identified and the possibility of their application in higher economic education in Ukraine is considered.

Conclusions. The conclusion is justified that the results of professional training of future Bachelors of Business Economics in Ukraine and Europe, as well as in China, are determined on the basis of the competence approach. The analysis of the educational and professional programs of universities in China allowed us to determine such competence groups in the professional competence as follows: general (integral) competencies, which mean possession of flexible («soft») skills; personal (subject) competencies, which include values, motivations and characteristics of graduates; professional (subject-specific) competencies which include «solid» skills. Using the positive experience of professional training of future Bachelors of Business Economics in China can significantly improve current economic education in Ukraine.

Keywords: *economic education; educational and professional program; professional competence; structure of professional competence of an economist; formation of professional competence of an economist.*

Introduction. Market relations, the integration of our country into the international community, comprehensive informatization of society need to improve the quality and level of economic activity of enterprises and organizations. It leads to the new, more stringent requirements for Bachelors of Business Economics. That is why today the training of a competitive economist who has a high level of professional competence is one of the priority tasks of the higher education system in the field of Business Economics. It is necessary to study the experience of those countries in which the training of Bachelors of Business Economics is carried out at a high level. As a rule, the basis of this training is the application of a competency-based approach; it is efficient in the countries of the European Union and in China.

Materials. Analysis of the sociological, educational, cultural and economic literature suggests that the problem of the formation of professional competence of various scientific positions has always interested scientists, but in the transformational period of our country it has acquired particular relevance. The Chinese professional education experience was studied by N. Borevska, S. Gala, I.Serhiichuk.

The issues of formation of professional competence of a specialist of Economics are considered in the research of numerous scientists, namely: the philosophical and methodological approach (V. Andrushchenko, Yu. Afanasiev, V. Bondarenko, H. Vasianovych, D. Dzhola, O. Dubaseniuk, I. Ziaziun, V. Kremen, M. Mykhalchenko, P. Saukh); study of particular types of professional competence (M. Bohatyrova, I. Vorobiova, V. Safonova, V. Topalova – sociocultural competence; R. Hryshkova, N. Ihnatenko, V. Kalinin – development of the foreign language sociocultural competence; V. Liventsova – the culture of professional communication of future managers; L. Savenkova – communicative competence, V. Cherevko – communicative competence of the future managers in the course of training); training of specialists at the economic university (M. Artiushyna, L. Volkova – foreign language communicative competence of future specialists of financial and economic major; N. Zamkova – development of professional qualities of the future managers of external economic activity in the process of learning foreign languages; H. Romanov, O. Yatsyshyn – development of motivation for studying a foreign language by students of economic major). However, the results of the analysis of scientific literature convince us that the problem of the formation of professional competence in future Bachelors of Business Economics is inadequately treated and needs development from the viewpoint of foreign experience.

The article aim is to identify and characterize the features of determining the results of training of the future economists on the example of the state university in the People's Republic of China.

The **research methods** which were used during the study are as follows:

– *theoretical methods:* analysis (to study the educational and professional program of the Chinese University and determine the results of future Bachelors training in the Business Economics major in Chinese universities), observation (to determine the specific features of formation of results of Bachelors' training), the comparison (to identify the positive features of the formation of professional competence of future Bachelors in China business economy), generalization (to formulate conclusions and recommendations on the use of professional results of the Bachelors of Business Economics for application in the domestic education).

– *empirical methods:* observational (direct observation of the educational process at a university in the People's Republic of China) – to determine the specific features of identifying and researching the results of professional training of Bachelors of the Business Economics major at a Chinese university.

Results and discussions. The determination of the results of professional training of specialists in general and economists in particular is carried out on the basis of the competence approach in different countries of the world, therefore, the analysis of the specific features of the process of the formation of professional competence of the future Bachelors of Business Economics and its component structure abroad is very relevant.

Within the framework of the Business Economics major in China, individual competencies also significantly influence the level of professional competence, the possession of which can determine the competitiveness of a modern specialist. Let us analyze them on the example of Jiaxing University in China.

Requirements for the professional competence of the Bachelor of the Business Economics major are defined in the educational and professional program, which is the standard of higher education in China (Educational and professional program for Bachelor's Degree, 2018). This program is the basis for the development of the curricula for all academic disciplines in higher education institutions of China. They include the structure of the content of disciplines in higher education institutions, they set the scope of educational material for students to master, the means of determination of the quality level of an educational and professional training of the specialist.

The educational qualification program of Chinese universities is aimed at meeting the high level of students' requirements for language training (English), professional knowledge and specialized skills that are necessary for the general development of the international business economy. In addition, the Business

Economics training program aims at providing students with an understanding of the English language and culture, financial and legal operations abroad, opportunities for learning, communication practice in a business environment in global view, including English, management, a specific spirit of innovation and entrepreneurship (Educational and professional program for Bachelor's Degree, 2018).

The structure of professional competence of the future Bachelor in Business Economics in Chinese universities has the following components: general (integral) competencies, personal (subject) competencies and professional (subject-specific) competencies.

General (integral) competencies embody the complex requirements for the quality of education imposed on the future Bachelor in Business Economics at the Chinese University (Educational and professional program for Bachelor's Degree, 2018) and include many flexible, or "soft", skills that are responsible for successful participation in the workflow, high productivity and as opposed to specialized skills are not related to a specific field. The program indicates the following:

– a positive outlook on life and entrepreneurship;

– a profound connection to national traditions and cultures;

– a high cross-cultural humanistic literacy and knowledge horizon;

– a spirit of contribution to the nation and service to the society;

– a mastery of professional theoretical knowledge and practical skills, with the foundational quality to transform professional knowledge into international application;

– a fine spirit for cross-cultural teamwork and an open global vision;

– a professional ethics with adherence to patriotism, honesty and trustworthiness.

The requirements for personal, or subject, competencies of a graduate of the Chinese University (Educational and professional program for Bachelor's Degree, 2018) majoring in Business Economics are:

– understanding the operational rules of cross-border e-commerce and international business management, as well as the basic rules and procedures of the World Trade Organization,

– being familiar with the cultures, policies, regulations and international practices in international businesses, economics and trade work in the context of the One Belt One Road initiative;

– recognizing future trends and knowledge requirements for the managerial development in cross-border e-commerce and international business;

– possessing a high level of professional responsibility and national responsibility;

– maintaining a rigorous cross-cultural management style and healthy psychological quality;

– having a fine professional spirit for cooperation within cross-cultural teams;

– preliminary formation of scientific thinking method that meets international standards, and possession of an open sense of innovation, spirit of innovation and practical innovative skills in cross-cultural settings.

According to the educational and professional program (Educational and professional program for Bachelor's Degree, 2018), the basic professional or subject-specific competencies that the future Bachelor in Business Economics should master are as follows:

– solid theoretical foundation in international business economics and trade and self-sustainble skills in both offline / online practices, international business management skills;

– ability to use modern information technologies of the Internet to handle international trade businesses, to understand the modes of operations and transactions procedures in international e-commerce;

– basic technologies and skills for cross-border e-commerce applications and their management;

– ability to process, analyze, judge and make decisions based on big data in global trade and international business management issues;

– ability to conduct cross-cultural exchanges and communication around business management, organize and coordinate international business activities, and form self-developing capabilities for strategic planning and global leadership;

– proficiency and specialization in at least one foreign language (especially English), and its corresponding international business etiquette and negotiation skills, with the ability for coordination, communication, and expression in spoken and text forms;

– skills for modern information search and data retrieval within specialist fields, and sustainable ability for continued self-learning.

We may notice that many of these skills are "solid," that is, the ability to perform specific functional tasks. Such skills are stable, clearly visible, measurable, and refined with specific designs; they are included in the list of requirements set out in job descriptions; they are easily disunited into some simple final operations.

The results of training under the educational programs in Ukraine are also determined on the basis of the competency-based approach. Within a particular profession, the level of professional competence is significantly affected by individual competencies that may enhance the competitiveness of a specialist in the modern world.

In Ukraine, the demands for the professional competence of a specialist in economics are established in the educational and professional program (EPP) which

must satisfy the standards of higher education. EPP is the basis for the development of programs of all academic disciplines in the higher educational institutions. They describe the structure of the content of disciplines in the the higher educational institutions, set the amount of educational material for students to master, identify the tools to determine the quality level of educational and professional training of a specialist.

For the study of professional competence of future economists, it is relevant to take into account the results of the scientists' research about the essential competencies included in their composition. The process of developing these competencies has caused the occurrence of different classifications. Now let us consider them in detail.

S. Molchanov (2008) defines professional competence as the scope of abilities, terms of reference in the field of professional and educational activity. In the narrower sense, professional competence is interpreted by him as a circle of issues in which the subject has knowledge, experience, the totality of which represents the socio-professional status and professional qualifications as well as some personal, individual characteristics that enable the implementation of the special professional activity.

A. Busyhina (2003) considers professional competence as an integral systemic feature of an individual, the structural elements of which are professionally meaningful (the fundamental part assuming the presence of theoretical knowledge within the profession, that ensures awareness of the content of the professional activity); the professional activity (practical element, including professional knowledge and skills), tested in action, learned by the person as the valid one) and professional-personal ingredient, including professional and personal traits of a specialist as a person, an individual, and a coordinator of the activity.

O. Bondareva (2003) identifies the following components of professional competence of a specialist: motivational-volitional, functional, communicative and reflective one. All of these components are integrated into the researcher's work into one of the most synthesized formations – communicative and functional competence, which is an integrative quality of the personality of a specialist in Economics.

V. Vvedenskyi (2003) suggests five components of the structure of the professional competence. They include the communicative ability, the main elements of which are: emotional stability (connected with adaptability), extroversion (associated with status and experienced leadership), the ability to design-forward and feedback; speech skills; listening skills; the ability to reward; delicacy, ability to freely communicate; regulatory competence implies the ability to manage the behaviour; information competence includes the volume of information about oneself, about the work experience of other colleagues.

Recently, there have been substantial changes in the organization of labour in industries. Professional activity of an economist is based on interactions with colleagues, organization of joint activities, which allows us to talk about the necessity to develop skills of the future economists in accordance with the classification of psychological requirements of professions such as "Person to Person", including the desire for communication; the ability to communicate with strangers easily; goodwill, responsiveness, endurance, the capability to regulate emotions; the ability to analyze the behaviour, to understand the intentions and moods of other people; the ability to understand the relationships among people; knowledge of the human psychology.

It is important to note that the reform of the higher school of Ukraine in the context of the Bologna process predetermines the need to improve and enhance the quality of language education in Ukraine. Without students' knowledge of at least one foreign language, it is impossible to fulfil the main provisions of the Bologna Declaration: adaptation to the norms and standards of the European educational space, mobility, and professional competition can only take place if university graduates have a knowledge of the foreign language and the developed communication skills in relevant academic and professional situations and everyday communication. "In the context of increasing speed, quantity, multidirectionality and multilingualism of information flows as well as an increase in the diversity and degree of penetration of electronic media into the life, the ability to quickly and correctly perceive and interpret the content in foreign language is a fundamental factor in making the right management decisions," R. Gottlieb believes (2009).

Since language and culture act as the principal personal vocational-forming factors in the learning process, there is the reason to talk about the cultural and language training of a specialist, which is offered by the educational and professional program of universities in China.

Knowledge of a foreign language and foreign culture for the Bachelor of Business Economics is an integral component of professional competence in both China and Ukraine. The introduction of the term "intercultural competence" for the field of economics is explained by the fact that a specialist in this field should use a foreign language as a means of communication, taking into account the specificity of the linguacultural community, the specifics of particular concepts in their own and other professional cultures, having the ability to distinguish and differentiate between the general and the specific (Artemova, 2008).

Professional intercultural communication takes place in business contacts. In the process of intercultural professional communication, information is exchanged, contacts are established. Modern pedagogy has dealt with the task of teaching the basics of the intercultural competence of Economics specialists. Moreover, this approach to teaching a foreign language, in particular, is noted as necessary one by both economists and educators as well as foreign language teachers. It is due both to the needs of the modern market for economists and contemporary requirements for a qualified pedagogical process (Educational and professional program for Bachelor's Degree, 2018).

Conclusions. The results of professional training of future Bachelors of Business Economics both in Ukraine and Europe and in China are determined on the basis of the competency approach. The analysis of the educational and professional programs of universities in China allowed us to determine such competence groups in the professional competence as follows: general (integral) competencies, which mean possession of flexible ("soft") skills; personal (subject) competencies, which include values, motivations and characteristics of graduates; professional (subject-specific) competencies which include "solid" skills.

As we can see, the educational and professional program of Jiaxing University in China (Educational and professional program for Bachelor's Degree, 2018) especially emphasizes the need for knowledge of a foreign language and Internet technologies, together with the specific features of business etiquette and culture of foreign countries for the implementation of successful economic activities. Using the positive experience of professional training of Chinese future Bachelors of Business Economics we can significantly improve modern economic education in Ukraine.

List of referenñås

Артемова, Л.В., 2008. *Педагогіка і методика вищої школи: Навчально-методичний посібник.* Київ: Кондор.

Артюшина, М. В., 2009. *Психологічні та педагогічні основи підготовки студентів економічних спеціальностей до інноваційної діяльності: монографія.* Київ: КНЕУ.

Бондарева, Е.В., 2003. Профессиональная компетентность специалиста в условиях становления информационного общества. *Вестник Волгоградского гос. ун-та. Сер. 6. Университетское образование,* 6, с. 44-48.

Боревская, Н.Е., 2012. Обеспечение доступности и привлекательности среднего профессионального образования в КНР. *Педагогика*, 7, с. 109-119.

Бусыгина, А.Л., 2003. *Профессор – профессия: теория проектирования содержания образования преподавателя вуза.* Изд. 2-е, испр. и доп. Самара: Изд. СамСПУ.

Введенский, В.Н., 2003. Моделирование профессиональной компетентности педагога. *Педагогика*, 10, с. 51-55.

Волкова, Н.П., 2007. Сутність і компоненти компетентності майбутнього вчителя у здійсненні професійно – педагогічної комунікації. *Педагогіка і психологія формування творчої особистості: проблеми і пошуки*, 42, с. 103-111.

Гала, С. В., 2011. Із досвіду реформування вищої освіти Китаю. *Економіка і держава*, 18, с. 52-55.

Головко, В.І., Мінченко, А.В. та Шаманська, В.М., 2006. *Фінансово-економічна діяльність підприємства: контроль, аналіз та безпека: навч. посіб.* Київ: Центр навчальної літератури.

Готлиб, Р.А., 2009. Социальная востребованность знания иностранного языка. *Социологические исследования,* 2, с. 122-127.

Зимняя, И.А., 2004. *Ключевые компетентности как результативно-целевая основа компетентностного подхода в образовании. Авторская версия*. Москва: Исследоват. центр проблем качества подгот. специалистов.

Молчанов, С.Г., 2008. *Теория и практика аттестации педагогических и руководящих работников образовательных учреждений.* Челябинск: Челябин. гос. у-т.

Освітньо-професійна програма для ступеня бакалавра, 2018. Цзясін: Видавництво академічного офісу Цзясінського університету, 2018.

Романова, Г. М., 2009. Психолого-педагогічна підготовка як чинник професійної самореалізації викладачів економічного університету. *Вісник Львівського університету,* 3(25), с. 167-175.

Сергійчук, І. М., 2006. Китай у нові та новітні часи: практикум: навч. посіб. Суми: *ВТД «Університетська книга».*

Melnyk O., 2017. Perspectives of usage of positive German experience in organization of bachelor program in economics and business education at Ukrainian universities. *Науковий вісник Інституту професійно-технічної освіти НАПН України. Професійна педагогіка,* 13, с. 139-144.

Translated & Transliterated

Artemova, L.V., 2008. *Pedahohika i metodyka vyshchoi shkoly [Pedagogy and methods of higher education]. Navchalno-metodychnyi posibnyk [Education and methodical manual]*. Kyiv, Kondor, [in Ukrainian].

Artiushyna, M.V., 2009. *Psykholohichni ta pedahohichni osnovy pidhotovky studentiv ekonomichnykh spetsialnostei do innovatsiinoi diialnosti: monohrafiia [Psychological and pedagogical bases of preparation of students of economic*

majors for innovative activities: monograph]. KNEU, [in Ukrainian].

Bondareva, E.V., 2003. Professyonalnaia kompetentnost spetsyalysta v uslovyiakh stanovlenyia ynformatsyonnoho obshchestva [Professional competence of the specialist in the conditions of formation of the information society]. *Vestnik Volgogradskogo gos. un-ta. Ser. 6. Universitetskoe obrazovanie [Bulletin of Volgograd National University],* 6, s. 44-48, [in Russian].

Borevskaya, N.E., 2012. Obespechenie dostupnosti i privlekatelnosti srednego professionalnogo obrazovaniya v KNR [Ensuring accessibility and attractiveness of secondary vocational education in China]. *Pedagogika [Pedagogy]*, 7, s. 109-119, [in Russian].

Busyigina, A.L., 2003. *Professor – professiya: teoriya proektirovaniya soderzhaniya obrazovaniya prepodavatelya vuza [Professor – profession: theory of designing the content of education of a university teacher]*. Samara, Izd. SamSPU, [in Russian].

Vvedenskiy, V.N., 2003. Modelirovanie professionalnoy kompetentnosti pedagoga [Modeling the professional competence of a teacher]. *Pedagogika [Pedagogy],* 10, s. 51-55, [in Russian].

Volkova, N.P., 2007. Sutnist i komponenty kompetentnosti maibutnoho vchytelia u zdiisnenni profesiino – pedahohichnoi komunikatsii [The meaning and components of competence of the future teacher in implemetation of professional and pedagogical communication]. *Pedahohika i psykholohiia formuvannia tvorchoi osobystosti: problemy i poshuky: Zb. nauk. prats. [Pedagogy and psychology of formation of creative personality: problems and solutions: Collection of scientific works],* 42, s. 103-111, [in Ukrainian].

Hala, S. V., 2011. Iz dosvidu reformuvannia vyshchoi osvity Kytaiu [From the experience of reforming higher education in China]. *Ekonomika i derzhava [Economy and state],* 18, pp.52-55, [in Ukrainian].

Holovko, V.I., Minchenko A.V. ta Shamanska V.M., 2006. *Finansovo-ekonomichna diialnist pidpryiemstva: kontrol, analiz ta bezpeka [Financial and economic activity of the enterprise: control, analysis and security]*. K.: Tsentr navchalnoi literatury [Center for Educational Literature], [in Ukrainian].

Gotlib, R.A., 2009. Sotsialnaya vostrebovannost znaniya inostrannogo yazyika [Social demand for knowledge of a foreign language]. *Sotsiologicheskie issledovaniya [Sociological research]*, 2, s. 122-127, [in Russian].

Zimnyaya, I.A., 2004. *Klyuchevyie kompetentnosti kak rezultativno-tselevaya osnova kompetentnostnogo podhoda v obrazovanii. Avtorskaya versiya. [Key competences as effectively-targeted basis of competence approach in education. Author's version]*. Moskva: Issledovat. tsentr problem kachestva podgot. spetsialistov [Research Center for the Problems of Quality Training of Specialists], [in Russian].

Molchanov, S.G., 2008. *Teoriya i praktika attestatsii pedagogicheskih i rukovodyaschih rabotnikov obrazovatelnyih uchrezhdeniy [Theory and practice of attestation of pedagogical and managerial employees of educational institutions]*. Chelyabinsk: Chelyabin. gos. u-t [Chelyabinsk state university], [in Russian].

Osvitno-profesiina prohrama dlia stupenia bakalavra [Educational and professional program for Bachelor's Degree], 2018. Tsziasin [Jiaxing]: Vydavnytstvo akademichnoho ofisu Tsziasinskoho universytetu [Jiaxing University Academic Office Publishers], [in Ukrainian].

Romanova, H. M., 2009. Psykholoho-pedahohichna pidhotovka yak chynnyk profesiinoi samorealizatsii vykladachiv ekonomichnoho universytetu [Psychological and pedagogical training as a factor of professional self-realization of teachers of the economic university]. *Visnyk Lvivskoho universytetu [Bulletin of Lviv University],* 3(25), s. 167-175, [in Ukrainian].

Serhiichuk, I. M., 2006. *Kytai u novi ta novitni chasy: praktykum: navchalno-metodychnyi posibnyk [China in new and modern times: practicum: education and methodical manual]*. Sumy: VTD «Universytetska knyha», [in Ukrainian].

Melnyk O., 2017. Perspectives of usage of positive German experience in organization of bachelor program in economics and business education at Ukrainian universities. *Naukovyi visnyk Instytutu profesiino-tekhnichnoi osvity NAPN Ukrainy. Profesiina pedahohika [Scientific Bulletin of the Institute of Vocational Education of the National Academy of Pedagogical Sciences of Ukraine. Professional Pedagogy],* 13, s. 139-144, [in English].

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Досвід Китайської Народної Республіки у визначенні результатів професійної підготовки бакалаврів з бізнес-економіки

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Реферат.

Актуальність. Сьогодні на шляху до повноцінних ринкових відносин Україна переживає часи глобальних економічних перетворень. У зв'язку з цим, країні необхідні спеціалісти з економіки для висококваліфікованої роботи як у вітчизняній, так і в міжнародній економіці. Але успіх у професійній кар'єрі можливий тільки за умов конкурентоспроможності випускників на ринку праці. Саме тому наразі одним із першочергових завдань системи професійної освіти є підготовка конкурентоспроможних фахівців, які мають високий рівень професійної компетентності. Аналіз літератури з соціології, педагогіки, культурології та економіки свідчить про те, що науковців

завжди цікавило питання формування професійної компетентності майбутніх спеціалістів з економіки, але останнім часом воно стало найбільш актуальним через те, що українська освіта знаходиться у стані модернізації.

Мета: виокремити та охарактеризувати особливості визначення результатів підготовки майбутніх економістів на прикладі державного університету в Китайській Народній Республіці.

Методи, що використовувалися нами під час дослідження:

– теоретичні: аналіз (для дослідження освітньо-професійної програми Китайського університету та визначення результатів з підготовки майбутніх бакалаврів зі спеціальності "Бізнес-економіка" у вищих навчальних закладах Китаю), порівняння (для виявлення позитивних рис формування професійної компетентності майбутніх бакалаврів з бізнес-економіки Китаю), узагальнення (для формулювання висновків і рекомендацій щодо використання результатів професійної підготовки бакалаврів з "Бізнес-економіки" для використання у вітчизняній освіті).

– емпіричні: обсерваційні (пряме спостереження навчального процесу в університеті в Китайській Народній Республіці) – для встановлення особливостей визначення та дослідження результатів професійної підготовки бакалаврів за спеціальністю "Бізнес-економіка" в китайському університеті.

Результати: виокремлено та охарактеризовано особливості визначення результатів підготовки майбутніх бакалаврів зі спеціальності "Бізнес-економіка" у вищих навчальних закладах на прикладі університету в Китайській Народній Республіці; розглянуто структуру професійної компетентності майбутніх бакалаврів з бізнес-економіки згідно з освітньо-професійною програмою китайського університету; визначено позитивні риси формування професійної компетентності майбутніх бакалаврів з бізнес-економіки Китаю та можливості їх використання у вищій економічній освіті в Україні.

Висновки: результати професійної підготовки майбутніх бакалаврів з бізнес-економіки як в Україні та Європі, так і в Китаї, визначаються на основі компетентнісного підходу; аналіз освітньо-професійних програм університетів Китаю дав змогу виокремити у складі професійної компетентності загальні (інтегральні) компетентності, особистісні (суб'єктні) та фахові (предметно-спеціальні) компетентності; використання позитивного досвіду професійної підготовки майбутніх бакалаврів з бізнес-економіки Китаю може покращити сучасну економічну освіту в Україні.

Ключові слова: *економічна освіта, освітньо-професійна програма, професійна компетентність, структура професійної компетентності економіста, формування професійної компетентності економіста.*

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Part III

FOREIGN AND HISTORICAL ASPECTS OF VOCATIONAL EDUCATION AND TRAINING DEVELOPMENT .....

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У збірнику обґрунтовано теоретичні і практичні проблеми формування й розвитку в учнів/студентів закладів професійної, фахової передвищої та вищої освіти професійної, підприємницької, художньо-творчої та інших компетентностей. Висвітлено методичні аспекти формування правової й технологічної культури та культури безпеки професійної діяльності. Викладено зміст і специфіку застосування інноваційних освітніх технологій: дистанційних, інтерактивних, самоменеджменту, розвитку професійної компетентності майстрів виробничого навчання, розвитку готовності педагогічних працівників до стандартизації підготовки молодших спеціалістів тощо. Охарактеризовано програмне забезпечення управління проєктами в закладах професійної освіти, використання платформи Classtime в умовах інклюзії. Окреслено особливості впровадження орієнтованого на результат управління в діяльність закладів професійної (професійно-технічної) освіти. Представлено результати науково-педагогічного аналізу реформування професійно-технічної освіти на початку незалежності України (1991-2000) та досвід Китайської Народної Республіки у визначенні результатів професійної підготовки бакалаврів з бізнес-економіки.

Для науковців, науково-педагогічних і педагогічних працівників закладів професійної (професійно-технічної), фахової передвищої та вищої освіти, структурних навчальних підрозділів підприємств, інститутів післядипломної педагогічної освіти, навчально (науково)-методичних центрів професійно-технічної освіти, аспірантів, докторантів.

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