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communication will allow you to successfully build a future career [2].

The integration of traditional and modern virtual teaching methods in the organization of educational activities of students will make more effective the quality of the educational process as a whole and, accordingly, the formation of informational- communicative competence of the future social educator. Development and use of virtual space in the forms of educational and independent work of students, provides greater independence of students, greater individualization of tasks related to the content of the subject material, the form of reporting and the nature of control.

So, in the article we have found out the ways of formation of informational- communicative competence of students. Among the most useful are the usage of educational exercises, training tasks, role games, which help to form a culture of oral speech of students in the process of communication via the Internet (online webinars, voice chats, online conferences).

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FORMATION OF THE MATHEMATICAL COMPONENT OF THE PROFESSIONAL COMPETENCE OF FUTURE SPECIALISTS IN THE AGRICULTURAL SECTOR

Аннотация

В статье проанализировано понятие «профессиональная компетентность агрария» и «математическая компетентность». Определено «математическую компетентность агрария» как процесс формирования готовности к выполнению профессиональных задач, требующих применения математических методов и определенный уровень такой готовности.

Доказывается, что одним из перспективных направлений совершенствования подготовки специалистов, путем приближения к европейским стандартам является педагогическая интеграция. Обосновываются педагогические условия интеграции общественных, естественно-математических и профессионально-ориентированных дисциплин.

На основе изучения состояния практики и анализа требований к подготовке специалистов, определены и задачи математической подготовки студентов аграрного профиля.

Abstract

The article analyzes the concepts of "professional competence of an agrarian" and "mathematical competence". The "mathematical competence of an agrarian" is defined as a process of formation of readiness to perform professional tasks requiring the use of mathematical methods and a certain level of such readiness.

It is proved that one of the promising areas for improving the training of specialists, by approaching European standards, is pedagogical integration. The pedagogical conditions for the integration of social, natural-mathematical and professional-oriented disciplines are substantiated.

Based on the study of the state of practice and analysis of the requirements for the training of specialists, the tasks of mathematical training of students of the agrarian profile are also determined.

Ключевые слова: *естественно-математическая подготовка, подготовка специалистов-аграриев, профессиональная компетентность агрария, математическая компетентность агрария, педагогическая интеграция.*

Key words: *natural-mathematical training, training of specialists-agrarians, professional competence of an agrarian, mathematical competence of an agrarian, pedagogical integration.*

Formulation of the problem. Qualitative changes in social values and needs, significant transformations in the political life and economy of the country, the growth of complex research in the scientific field, the integrative nature of production, the growth of knowledge-intensive technologies have led to new requirements in training.

The modern period of the history of society is characterized by restructuring, radical changes in methods of planning, calculations, organization of production and management, decision-making on real investments, development of effective strategies for economic development. An integral condition for success in this restructuring is the elevation to a higher level of scientific level and quality of solving problems of the agricultural sector, the implementation of scientific developments in production. Versatility and openness of the economy, a variety of forms of management are typical of the modern agro-industrial complex of Ukraine.

New demands of the agricultural sector require new approaches to the training of future professionals with higher education [1], the development of which is based on the principles defined by the Laws of Ukraine "On Education", "On Higher Education" [2,3]. In particular, it is the public utility of knowledge; social validity of thinking in the field of professional activity; combination of fundamental and professionalism of various educational programs based on individualization of the content of training of future farmers in accordance with the demand of the labor market; continuity of education, its systematic and systematic nature; content innovation, etc.

Analysis of the recent research and publications. The analysis of world tendencies in the field of agrarian education testifies to growth of requirements to professionalism and personal qualities of agrarians. According to scientists, the main problems that farmers will face in this millennium are: the constant complication of the content of agricultural activities; high level of professional standards; independent formulation and solution of creative and research tasks; complication of environmental problems; continuous mastering of advanced technologies of production and processing of products, new achievements of domestic and foreign experience. All this can be mastered only by a farmer with high professional competence, which provides developed creative, research abilities, a high level of spiritual and moral potential, competitiveness, erudition, ability to lifelong learning. Along with the above, the solution of complex professional problems requires the integration of knowledge, practical skills and abilities related to such agricultural sciences as natural sciences, mathematics, economics, law, cybernetics, etc.; ability to work in a single information environment, which involves the rational use of information technology in the process of professional activity.

Therefore, updating the content of education in Ukraine provides for its focus on the acquisition of key

competencies by students and on the creation of effective mechanisms for their implementation in everyday practice.

Attention is drawn to the fact that the directions, specific manifestations and results of activities in the agricultural sector largely depend on the subjects of activity. Therefore, the new requirements for the training of specialists, in addition to professional knowledge, skills, abilities, provide for the inclusion of the personal component, ie the development of professional qualities of the individual.

Digitalization of the agricultural sector today requires a specialist in thorough mathematics education, familiarity with computational methods of mathematics, fluency in linear programming, dynamic programming, game methods, a large amount of knowledge of statistics and probability theory, be able to set mathematical problems on an economic basis. Given the different approaches to solving specific professional problems, he must have a good understanding of mathematical models of economic and production systems, be guided in cybernetic approaches to production management. In turn, this requires the use of new scientific approaches, in particular, mathematical methods and models. Thus, it is safe to say that mathematics has played a leading role in the development of agricultural education. Changing the educational paradigm involves updating the mathematical training of agricultural specialists, the first components of which are its purpose, goals and objectives.

This necessitates the growth of mobility, creative initiative in the professional activities of specialists in all specialties of the agricultural sector, which, in turn, provides for the introduction of innovative forms, methods and content of training future professionals for professional activities. The training of specialists in the agro-industrial complex is now subject to new requirements, one of which is the formation of such thorough knowledge that would maximize the intellectual development of the individual, its development of a holistic system of knowledge focused on the greatest development of the future. agrarianism, its inclinations, preferences, social, national and professional maturity.

Modern information and communication technologies are increasingly penetrating the educational process of higher education, becoming almost its main system-forming component, which largely determines the nature and vector of educational development.

One of the areas of reform and development of modern higher education, which requires full information support, is distance learning, which is becoming increasingly popular in the world [4].

Recent reforms of the higher education system in Ukraine take these requirements into account. Scientists raise current issues of ensuring the quality of education, which would meet European requirements, but primarily satisfy the Ukrainian labor market [5,6]. Therefore, improving the content of traditional and developing new methods, forms and teaching aids is one

of the most important tasks of higher education. At present, educators face a priority requirement - improving the quality of vocational education, which would meet the modern needs of society and be competitive in the global labor market.

The role of fundamental disciplines in the formation of professional competence has been the subject of many studies. Based on the analysis of professional competence and its key competencies as components of the competence of future specialists in technical specialties V. Petruk identified competencies that should be formed by teachers of fundamental disciplines in junior students in technical universities: motivational, cognitive-creative, communicative [7].

Taking into account the international and domestic experience of the competence approach in mathematics education allowed to clarify V. Achkan the concept of mathematical competence is the ability to see and apply mathematics in real life; understand the content and method of mathematical modeling; ability to build a mathematical model, to study it by methods of mathematics, to interpret the obtained results, to estimate the error of calculations [8, p.8].

L. Nichugovska developed a professional-competence model of teaching mathematical disciplines of economic specialists, which is based on deep integration with the disciplines of the economic cycle and is implemented through the introduction of modern information technologies in the educational process based on its information and computer support [9, p.14]

Purpose. To consider ways of realization of the competence approach in mathematical preparation of the future agrarian On the basis of studying of a condition of practice and the analysis of requirements to preparation of experts, to define the purpose, the purposes and tasks of mathematical preparation of students-agrarians. Prove that one of the promising areas for improving the training of specialists by approaching European standards is pedagogical integration. To substantiate pedagogical conditions of integration of social, natural-mathematical and professionally-oriented disciplines.

Main material presentation. The importance and significance of mathematics education in the training of future farmers is not only to ensure general intellectual development, creating conditions for the realization of the rights to full and continuing education, but also to promote the formation of certain professional competencies.

The phenomenon of "competence" is inextricably linked with the training process. E. Thorndike in the XIX century among the laws of learning singled out the law of readiness, according to which the reaction of the subject depends on his readiness for this action. In the psychological and pedagogical literature there are a number of definitions of competence, which are as follows. The term "competence" (Latin *competens* - appropriate, capable) means the range of powers of any official or body; possession of knowledge, experience in a particular field. Under professional competence is understood the personal capabilities of the specialist,

which allow him to independently and effectively implement the goals of the professional process. To do this, you need to know the relevant theory, be able to apply it in practice.

The professional competence of an agrarian is the unity of his theoretical and practical readiness to carry out agrarian activity. The structure of professional competence of agrarians is revealed through professional skills.

Referring directly to the concept of "Mathematical competence of agrarians", it should be noted that despite its general use, it is very vague and multifaceted.

The analysis of research shows the specificity of general mathematical training of agricultural specialists, which causes contradictions between the real level of general mathematical training and necessary for the study of applied mathematical methods, their creative application, the presence of relevant personal qualities realized in further professional activity.

Formal analysis of the concept of "competence", based on the above approaches, formulated in terms of "formation of competence" (procedural component) and "level of competence" (productive component) allows to define "mathematical competence of farmers" as a process of readiness to perform professional tasks, requiring the use of mathematical methods and a certain level of readiness.

A more detailed description of the phenomenon under study should reflect the modern understanding of social functions, tasks, opportunities, educational and developmental potential of mathematical training. However, both procedural and effective components already contain them in a condensed form.

Thus, considering the procedural component of the "mathematical competence of the agrarian" as an element of the educational process, we automatically endow the object with educational, upbringing and developmental functions. A specific feature of the formation of key competencies in the process of mathematical training is its implementation on the basis of mastering systematized mathematical scientific knowledge and methods of implementing mathematical methods. This approach to determining the procedural component allows the productive use of the theories of the educational process and developmental learning.

Turning to the effective component of "mathematical competence of farmers", it should be noted that formally, the required minimum level of competence of the specialist is regulated by State educational standards, which formulate the social order of society and the state in specific conditions. Currently, the State educational standards contain requirements for mastering the system of knowledge and methods of activity, and the goals of development, formation of the personality of future specialists-agrarians are practically not regulated and not specified.

Based on the above, we consider the mathematical competence of farmers as an element of the professional educational process, organized on the basis of mastering systematic mathematical scientific knowledge and methods of implementing mathematical methods in agriculture which involves mastering the content of mathematical disciplines based on methods,

forms and teaching aids. development of analytical thinking, form communicativeness, reflexivity and creative approach to solving problems as close as possible to future agricultural activities.

Of particular importance is the fact that the implementation of such a model is not limited to solving educational and applied problems related to agricultural activities, but involves the development of new approaches to shaping the content, forms and methods of teaching aimed at shaping the personality of the future specialist.

So, setting the task of forming the mathematical competence of agricultural specialists, we proceed from the understanding that the peculiarity of the mathematical competence of the agrarian as a result of professional training is that in comparison with other results of training it is:

- integrated result;
- allows you to solve a wide range of tasks (as opposed to the element of functional literacy);
- exists in the form of activity, not information about it;
- agreed (related to the whole range of objects of interaction);
- is improved not by automation and transformation into a skill, but by integration with other competencies – awareness of the common basis of professional activity increases competencies, and the method of activity begins without the involvement of additional internal resources (as opposed to skill);
- is manifested consciously (as opposed to skill).

Philosophical thought says that these components have always been determined by the objective conditions that surround the specialist. Therefore, for the correct formulation of goals, objectives and objectives it is necessary to proceed from the conditions under which the future farmer will carry out their professional activities in the future.

The emergence of new specializations, the transformation of agricultural education requires the need not only to introduce new courses in the educational process, but also to make appropriate changes in the content of disciplines taught traditionally. Such disciplines, first of all, include "Higher Mathematics", the content of which has remained almost unchanged for decades. And if the penetration of mathematics into agricultural science and the restructuring of the latter are only partially based on the use of the classical apparatus of mathematics, then some of its sections are of great importance in applied aspects.

According to experts, the training of farmers should be carried out in close connection with the information and mathematical support used in their professional activities. Optimization of the structure of the content of these disciplines, a combination of fundamental theoretical training and applied should ensure the improvement of the quality of professional training [10, p.18-19].

We can not ignore the problem of professional competence of the future specialist, which involves developed creative, research abilities, a high level of spiritual and moral potential, competitiveness, erudition,

the ability to lifelong learning. After all, solving complex professional problems require the integration of knowledge, practical skills and abilities from other related disciplines; ability to work in a single information environment, which involves the rational use of information technology in the process of professional activity.

In view of the above, currently the renewal of the content of education in Ukraine is focused on creating conditions for students to acquire key competencies and to develop effective mechanisms for their implementation in everyday practice. Today, the importance and significance of mathematics education in the training of future farmers is not only to ensure general intellectual development, creating conditions for the realization of the rights to full and continuing education, but also in the formation of certain professional competencies.

The issue of improving the level of mathematical training at the agronomic faculties of higher educational institutions attracts the attention of a number of scientists.

Farmers must be equally successful in both professional and mathematical knowledge.

Consider in more detail the mathematical training as a basic in the professional activities of farmers.

Originating from the demands of practice, mathematics was created to solve three fundamental life problems: "counting and measuring the number of various objects and quantities; measurement of spatial forms of the surrounding world; study of structures, ie structures and connections of elements of complex objects" [11, p.44].

In determining the purpose, goals and objectives of mathematical training of students of agricultural specialties, we relied on a number of works, choosing as a basis those described in the work of G. Dutka [12].

In our opinion, the purpose of modern mathematical training of students of higher educational institutions of agrarian profile is to solve three equal problems:

- 1) Development of students' systematic understanding of the application of mathematical knowledge in professional activities, education of mathematical culture.
- 2) Mastering the content of mathematical disciplines on the basis of methods, forms and means of teaching that promote the development of analytical thinking, form communicativeness, reflexivity and a creative approach to solving problems as close as possible to future professional activity.
- 3) Formation of skills to solve problems of integrated content, containing knowledge of mathematical and professional-oriented disciplines, using modern information technology.

At the same time, the observational experiment allowed to identify a number of problems faced by students:

- inability to retain in memory and formulate certain theoretical positions in mathematics at the level provided by the theory of the subject;
- simplification of the proposed tasks, the transition to the field of everyday understanding and explanation of basic mathematical terms in "simple" language;
- inability to imagine a holistic picture of the mathematical model, the desire to break it into separate parts and elements;

- inability to connect mathematical phenomena with processes in the agricultural sector;
- vagueness in the formulation of their understanding of the subject of study;
- lack of proper interest in the study of mathematical disciplines;
- difficulties in independent study of scientific and special literature;
- reproductive level of knowledge and skills;
- lack of motivation to independently master new knowledge, develop intelligence.

Taking into account the outlined requirements for specialists in agricultural specialties and the state of practice, we will formulate general and specific goals of teaching mathematics.

1. Mathematical goals. Analysis of mathematical models in the process of studying mathematics, solving problems with real applied content will demonstrate the existence of deep and fruitful links between mathematics and the future profession, and through them - the relationship of mathematics with the problems of the world. Construction and research of the simplest mathematical models will promote development of skills of application of mathematical methods for the analysis of real situations. The use of research tasks in the process of studying the course of mathematics will overcome the formalism in the teaching of mathematics and will encourage the development of interest in its study.

2. Professional goals. One of the most important goals of acquaintance with the elements of future professional activity in the process of studying mathematics is the formation of a professional way of thinking. Illustration of mathematical constructions with meaningful agrarian realities, demonstration and independent construction of mathematical models in the agrarian sphere, implementation of applied content in the program of the mathematics course shows that in the process of interaction of these disciplines it is possible to successfully train agrarian specialist.

The above allowed us to formulate the specified goals of mathematical training:

- mastering general and special mathematical knowledge, skills to interconnect this knowledge with the requirements of professional education;
- ensuring continuity in the study of mathematical and special disciplines of agricultural profile;
- integration of mathematical and special knowledge and skills, with the prospect of application in future professional activities;
- development of creative abilities of future farmers on the basis of integrative, problem and activity approaches in the educational process.

Of particular importance is the fact that the implementation of such a model is not limited to solving educational and applied tasks related to professional activities, but involves the development of new approaches to the formation of content, forms and methods of teaching aimed at shaping the personality of the future specialist.

Since the concepts of purpose and goals belong to the category of the result, which is the result of certain actions, the specific way to achieve it can be expressed through a system of relevant tasks:

- improvement of programs of mathematical disciplines taking into account integrative connections and possibilities of their information support;

- ensuring the continuity and continuity of the study of mathematics throughout the study period, in terms of multi-level training;

- improvement of fundamental training of students on the basis of use of modern information technologies;

- disclosure of the logical structure of the sections of mathematics studied at such a level that would ensure the successful and conscious use of these sections by future faivtsy to solve applied problems;

- rejection of the complete formal-logical construction of the mathematical course on the basis of its information saturation, which at the same time excludes the recognition of the legitimacy of a purely practical, narrowly utilitarian approach to the teaching of mathematics;

- teaching special mathematics courses to the extent necessary for the study of professionally-oriented disciplines;

- education of mathematical culture and development of mathematical intuition. Development of abilities of logical thinking, exact and laconic statement of difficult thoughts ;

- purposeful development of creative abilities of students, their socio-psychological and personal qualities;

- creation of preconditions for further independent study by students of various sections of mathematics, mainly of applied character. Active mastering of modern methods of scientific research;

- the optimal ratio between the volume of theoretical provisions and applied issues based on the integration of knowledge;

- formation of information culture;

- formation of skills of work with scientific literature; ensuring a level of mathematical development of students that would be sufficient for them to read and understand the literature in the specialty, which includes the application of mathematical methods in relevant fields.

- use of applied mathematical packages in the process of teaching material. Construction and demonstration on this basis of mathematical models of agricultural processes;

- systematic involvement of students in the process of solving professional problems that reflect the typical problem situations that arise in the workplace;

- meeting the needs of special departments in conducting course, research and diploma theses.

- construction of a course of mathematics on the principle of sufficient motivation of new concepts, at the same time with exact and formal definition of each of them;

- conducting laboratory classes on mathematical modeling using applied mathematical packages and programs;

- introduction of an additional system of control of students' knowledge by performing calculation and course work on applied mathematics.

Based on the study of approaches to the content of training specialists in agrarian higher education institutions, we have identified the following four cognitive blocks: social; mathematical; natural; disciplines that

are related to the main branches of agriculture (crop production, animal husbandry, agricultural mechanization). Under the social and natural-mathematical training of an agricultural specialist, we understand the result of students mastering a specially selected set of elements of social and natural-mathematical knowledge, skills, abilities and values necessary for successful implementation of professional activity in the field of agriculture. We interpret vocational training as a set of disciplines that develop and supplement fundamental courses, the content of which significantly shapes the readiness of the future specialist for his future professional activity. We have identified various interdisciplinary links of an integrative nature between these blocks of academic disciplines. A separate study allowed us to conclude that under the already mentioned conditions, social, mathematical or professionally-oriented disciplines serve as system-forming factors. Because only social disciplines give an understanding of the structure, history and development of society, and mathematical operate with abstract concepts that are concretized in other blocks of disciplines. Vocational-oriented disciplines play an intermediate role between the two mentioned blocks and professional training. And act as a cross-cutting component of the content of education.

This allowed us to formulate the concretized goals of professional training of future farmers, namely: their mastery of general and special knowledge, the ability to interconnect professional knowledge with the requirements of agricultural education; ensuring continuity in the study of general and professionally-oriented disciplines of agricultural profile; integration of natural-mathematical, social and special agricultural knowledge and skills in professional activity; development of creative abilities of agrarians on the basis of integrative, problem and activity approaches in educational process

Integration of social, natural-mathematical and professionally-oriented training of agrarians is a process of preparation and readiness to perform professional tasks that require comprehensive application of knowledge, methods, apparatus in social, natural-mathematical and professionally-oriented disciplines.

Having studied and analyzed key concepts, we understand the pedagogical conditions of integration of social, natural-mathematical and professional-oriented disciplines, as a set of interrelated circumstances of the pedagogical process necessary to create a holistic training, which will provide training of highly qualified specialists at the lowest cost.

The analysis of pedagogical conditions for improving the quality of professional training of students, allowed to formulate their main groups:

- formation of a system of natural-mathematical, social and professionally-oriented knowledge of agricultural profile on the basis of an integrative approach;
- use of a problematic approach to structuring the content of education;
- use of information and communication technologies and multimedia means;
- introduction of distance learning;
- focus on the synergetic paradigm of education, which is closely related to the processes of integration

and systematization of the content of education, its openness.

These pedagogical conditions are based on the following system-forming ideas of integration of agricultural training: orientation on the synergetic paradigm of education; providing motivation for learning; realization of personal development of students.

Consider in detail each of the above pedagogical conditions.

1. Formation of a system of natural-mathematical, social and professionally-oriented knowledge of agricultural profile on the basis of an integrative approach.

Based on the analysis of interpretations of the term integration of training, we have identified its procedural and effective components. We understand the effectiveness of integration in professional training as a systematized set of knowledge, skills, abilities, creative experience, formed on the basis of the above blocks of disciplines, their focus on the formation of a future specialist holistic picture of the world, systematic thinking, the ability to comprehensively solve professional problems, to consider phenomena in all possible relationships and connections. In other words, integration is a way to combine the necessary knowledge, skills, abilities from different disciplines, creative activity, its importance for the formation of future farmers. From the procedural point of view, such processes involve the integration of forms, methods, teaching aids, which allows to solve each professional problem as a system object with a focus on promising problems of the future.

Since the training process is a complex nonlinear system, in our opinion, it is first necessary to identify and characterize the integrating system-forming factors that will help to more effectively implement integration ideas.

Implementation of a systematic approach to the integration of natural-mathematical, social and special training in agricultural universities involves the implementation of the following steps: analysis of regulations; study of directions of economic activity of agricultural enterprises in relation to the purposes of training specialists; analysis of elements of the content of education, namely the disciplines involved in integration; establishing links between the elements of these disciplines, determining their nature; definition of forms, methods, means of their demonstration; development of technology for integration of training; disclosure of the dependence of the installed system on external conditions; assessment of the quality of training, which has an integrated nature.

Thus, the systematic assimilation of many facts, concepts and judgments in the study of natural and mathematical and social sciences by students is in accordance with the logical connection and rational continuity of knowledge in professionally-oriented disciplines, reflecting the logic of training. Such integration of knowledge is the basis for the formation of a holistic system of professionally significant qualities of the future specialist.

In the age of the information society, the problem of dense composition of knowledge and their operational use becomes essential. Therefore, on the way to

the transition from a disciplinary to a systemic model of educational content, the problem of integration is a promising direction in modern vocational education. The integration of knowledge of mathematical disciplines and professional knowledge makes it possible to implement the principle of professional orientation in student education, which in turn allows to effectively overcome the negatives and contradictions that arise in the multidisciplinary system of higher education. The acquisition of integrated knowledge, skills and abilities, carried out with the help of new information technologies, has a number of advantages, namely: "compacts", organizes information, allows to develop individual trajectory and pace of training, opens wider opportunities for obtaining, processing and using educational information, which improves the level of preparation of the student, raises him to a qualitatively new level of organization of independent learning.

The requirements of integration also apply to the process of forming tasks of professional orientation on the basis of the content of several disciplines of the curriculum, knowledge of which the student will apply in the process of independent or collective solution of these tasks. The modern approach in research of the problem of integration and its significance for the development of vocational education is to develop a didactic concept of interdisciplinary integration as a scientific and practical basis for quality training.

However, if mathematical knowledge entered technology indirectly (through a cycle of general scientific and general technical disciplines), then in economics - directly as a source of basic ideas and the necessary apparatus for the construction and improvement of this field. This fact alone significantly increases the requirements for mathematical education of economists, requires the active participation of all teachers in the formation of an integrated system of training economic professionals.

2. Using a problem-based approach to structuring the content of education based on the ideas of interdisciplinary integration.

Problems in learning are the most necessary means of developing productive logical thinking, which can improve the quality of training for agriculture.

Problem-based learning is often offered to provide professional motivation for learning. This approach allows you to prioritize the needs and interests of the individual, to develop tasks that most fully reveal the potential of each student.

In the process of problem-based learning there is a true integration because we are not dealing with the superimposition of knowledge on each other, not with their usual increase, but with their transformation and the emergence on this basis of psychological tumors in humans. A number of scholars derive such a pattern of pedagogical integration as the relationship between the level of problem-based learning and levels of integration of its subjects: the higher the level of problem-based learning, the higher the level of integration of those who teach and those who teach.

Thus, the integration of natural-mathematical, social and vocational disciplines in the training of specialists in agricultural universities due to the problematic

way of learning gives new features to the educational process, which is a significant factor in the formation of professional motivation, which results in knowledge that meets all regulatory requirements for a modern specialist.

3. Currently, the priority in the pedagogical process of higher education is the use of information and communication technologies and multimedia tools: the introduction of electronic learning tools (textbooks, manuals, catalogs, dictionaries, etc.), computer training programs; introduction of a rating system for assessing knowledge; increase the objectivity of knowledge assessment. One way to solve this problem is to use the possibilities of multimedia support in high school.

Multimedia support is based on the following principles:

The principle of modality. It is based on Mayer's theory of double coding: information that is presented both verbally and visually is better remembered [13].

The principle of spatial communication. Students perceive information better if the words and relevant pictures are presented on a page or screen side by side, rather than far from each other.

The principle of time communication. If the words and the corresponding visualization are presented synchronously, not sequentially, it contributes to better mastering of the material.

The use of multimedia in lectures allows you to create a visual series that helps to increase the pace of presentation of the material. Multimedia allows you to use encoded information not only in the form of tables, diagrams, charts, figures but also animations. This allows students to clearly show the dynamics of processes that are difficult or even impossible to demonstrate with chalk and blackboard.

Competent use of multimedia technologies in the educational process, no doubt leads to faster understanding and assimilation of new information. An example is the introduction of electronic manuals [14,15].

Mastering modern information technologies for analysis, optimization and forecasting of economic and natural processes on the basis of general and specific knowledge, creates a basis for the development of systematic thinking, implementation of a comprehensive approach to assessing both economic and environmental and social aspects of professional activity. and market economy. The use of new information technologies forms the personality of the information society with "new literacy", ie one that actively uses available means of information and telecommunication technologies in everyday life and, first of all, in education develops the ability to quickly find, process, use large amounts of quality information. ability that creates an atmosphere of psychological comfort. Good command of the international "language" of computer communication opens borders and forms a person free from the complexes of inferiority and provincialism.

4. Distance learning is one of the promising learning technologies that plays a significant role in the modernization of education. Scientists argue that the personal and telecommunications nature of learning - the main features of distance learning. In the study, we ad-

here to the definition of distance learning as the provision of distance educational services using new computer and communication technologies, universal, synthetic, integrated, humanistic form of learning.

Forms of organization of distance learning activities are various - from Internet conferences and webcasting of lectures to educational web forums and the like.

Many scholars define a training course as a distance course in which 80% of the training material is based on the use of on-line technologies. Today in the world disciplines are taught in the following formats: traditional teaching, courses with network support, hybrid or mixed course, on-line course. In our opinion, distance learning can take place within all types of didactic system.

Note that the subject, which is taught remotely, has certain didactic features. This is a clear structure, which includes a methodological section, a meaningful section, diagnostic and correctional blocks.

We have defined the principles of content selection in terms of distance learning: the focus of the content on future professional activities; ensuring the differentiation of educational tasks; the choice of ways to manage the educational and cognitive activities of students; interactivity; ensuring clarity and adequacy of educational material; feedback; structure, dynamism and variety of access to educational material.

5. Focus on the synergetic paradigm of education, which is closely related to the processes of integration and systematization of the content of education, its openness.

The synergetic approach makes it possible to consider any self-organizing process in the transition from chaos to order due to the internal factors of self-organization and self-government. Synergetics scientifically proves that in complex systems of any nature and any level of order, which is in an unbalanced state, weak control signals at the "input" can involuntarily increase at the "output", leading to radical changes in the organization of the system.

In synergetics, mainly open systems are considered. Their essential feature is that they can be controlled by changing external factors. When these essential factors are kept constant, they can be taken into account in the equations by setting the corresponding parameters constant. For example, the rate of growth of students' knowledge is regulated externally on the basis of the influence of relevant factors (content, forms, teaching methods, etc.). The evolution of synergetic systems is due to reasons that cannot be predicted with absolute accuracy. They can be partially determined by taking into account fluctuations (random deviations of the values of certain quantities from their average values). In didactic systems, fluctuations are especially important because they reflect a variety of subjective factors that "hinder" the formation of clear didactic theories and principles: individual characteristics of students, specific learning conditions, social conditions, and so on.

On this basis, there are three essential features of synergetic processes: correlation, self-organization, oscillation of opposites (chaos - order, integration - differentiation, etc.).

Thus, the combination of ideas of integration and synergetics makes it possible to consider the issue of training at a qualitatively new level. The most important, in our opinion, in the conditions we are considering, is the approach to training future professionals as an open system.

The priority steps in the implementation of these pedagogical conditions include: selection of optimal theoretical material; selection of the most effective forms, methods and techniques of learning that create the necessary conditions for independent processing of information, adaptation of multimedia tools and computer technologies for distance learning.

Peculiarities of integrative training of specialists in agricultural universities, due to the specifics of objects and methods of solving specific problems in the agricultural sector. These pedagogical conditions are an effective means of eliminating existing contradictions in the system of training farmers, in particular, their observance is a necessary condition for training that meets modern needs of practice.

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ОРГАНІЗАЦІЯ ПЕДАГОГІЧНОЇ ПРАКТИКИ В УМОВАХ ДИСТАНЦІЙНОГО НАВЧАННЯ

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ORGANIZATION OF PEDAGOGICAL PRACTICE IN THE CONDITIONS OF DISTANCE LEARNING

Анотація

В умовах пандемії та змішаного навчання у закладах вищої освіти потребує перегляду форма та зміст педагогічної виробничої практики, зокрема майбутніх фахівців дошкільної освіти. У статті подано досвід організації та проведення дистанційної педагогічної виробничої практики, у зв'язку з карантинними обмеженнями (COVID-19), розкрито її етапи (підготовчий, організаційно-аналітичний, виробничої практики, звітний), їх мету, засоби взаємодії зі здобувачами, результативність. Визначено переваги та недоліки такого формату роботи. Однак ця проблема залишається актуальною й потребує методологічного дослідження.

Abstract

In the context of a pandemic and blended learning in higher education institutions, the form and content of pedagogical industrial practice, in particular future preschool education specialists, need to be reconsidered. The article presents the experience of organizing and conducting remote pedagogical production practice in connection with quarantine restrictions (COVID-19), reveals its stages (preparatory, organizational and analytical, production practice, reporting), their purpose, means of interaction with applicants, effectiveness. The advantages and disadvantages of this format of work are identified. However, this problem remains relevant and requires methodological research.

Ключові слова: педагогічна виробнича практика, майбутні фахівці дошкільної освіти, дистанційне навчання.

Key words: pedagogical industrial practice, future specialists of preschool education, distance learning.

Компетентнісний підхід в підготовці майбутніх фахівців, зокрема й дошкільної освіти, передбачає обов'язковий практичний складник, який забезпечує поєднання теоретичних основ з практичними вміннями й навичками. Цим складником постає педагогічна виробнича практика. Як свідчать наукові розвідки (О. Абдулліна, О. Богініч, Н. Голота, Н. Горобаха, Т. Поніманської, Л. Рибалко, О. Семенов, Х. Шапаренко та інші) педагогічна практика формує позитивні професійні орієнтири, стає основою для подальшого професійного становлення, формування професійної ідентичності. Кафедрою

дошкільної освіти Бердянського державного педагогічного університету створено дієву модель педагогічної виробничої практики на основі наскрізної програми практик, яка багато десятиліть засвідчувала свою результативність.

Карантинні обмеження, пов'язані із COVID-19, внесли корективи в освітній процес закладів вищої освіти України, який з 2020 року передбачає змішану форму навчання.

У Бердянську базами практики є 14 закладів дошкільної освіти, які з вересня 2020 року повністю відновили свою роботу, дотримуючись нових правил в умовах адаптивного карантину. Основна