THE MODEL OF PROFESSIONAL EDUCATION FOR THE DEVELOPMENT OF STUDENTS' READINESS FOR INDEPENDENT LEARNING ACTIVITIES IN THE DIGITAL TRAINING ENVIRONMENT

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Abstract
This article is to develop students' readiness for independent educational activities in the environment of digital professional education.

Keywords: Professional education, digital skills development, independent educational activity.

It is necessary to design a model of professional education based on the concept of developing students' readiness for independent educational activities in the environment of digital training, which allows to present and record the structure of the developed system and the interdependence of its components. But before designing the model, it is necessary to decide about the methodological system itself, what it should be, what it should consist of and the interaction of the system elements.

Methodological system researchers and developers define the composition of components, the interrelationship of components and their operation within the system in different ways. MIMoro and AMPishkalo defined the methodical system as " A structure whose components are educational goals, educational content, teaching methods, teaching forms and tools" [1].

The methodical system includes the characteristics of the learner, his educational results, diagnostic systems of the leading suitability of the results, activities of subjects of the educational process, pedagogical conditions, teaching principles, didactic processes, etc. includes (VPBespalko, eS Kodikova, AVMogilev, VMMonakhov, GAMonakhova, GISarantsev, MVSheptukhovsky and others).

methodological systems are explained by the researchers' different approaches to their design, the desire to take into account the characteristics of the designed methods. In some cases, this leads to difficulties in analyzing and applying the proposed structures of methodological systems.

In our study, we take the definition of "unity and interdependence of its components such as goals, content, methods, forms and means of teaching" as the basis for the structure of the methodical system. Applying this structure to training, we believe that it is necessary to add an additional block to the methodical system - a diagnostic block, which allows to determine the efficiency of the designed methodical system.

Thus, we include purposeful, meaningful, process and diagnostic blocks in the developed methodical system [2].

methodological system should be formed based on the factors that make up the system. It is customary to distinguish between external and internal factors that shape the system. External factors are conditions that determine the formation and development of the system. The factors that make up the internal system unite individual elements and groups of system elements into a whole.

methodical system we are developing are: regulatory and legal documents of the field of education, professional standards, state requirements for professional education .

and methodological principles that form the basis of the developed concept .

Based on the concept of the methodical system presented above, we determine the goal of the developed methodical system - to develop the readiness of students for independent educational activities in the environment of digital training of professional education . This goal determines the main direction of the pedagogical activity of the professors who implement the methodical system .

the audience should acquire in order to achieve the objective . At the same time, the content of professional development is the current and should reflect the future needs and the audience itself. The content block of the methodological system should consist of training courses corresponding to advanced digital technologies : virtual technologies, computer modeling and artificial intelligence technologies, cloud computing technologies, etc. [3].

In accordance with the goal, the content of professional education should consist of several modules to develop the readiness of students for independent learning activities in the environment of digital training . The first module is necessary to develop an understanding of the social importance of one’s (professional) profession and to develop motivation to perform professional activities. The second module (subject matter) should include the content of modern digital technologies. The third module (methodological) is necessary to reveal the content of the methodology. The content of the fourth module (creative) should ensure the development of students’ readiness for independent educational activities in the field of creative and innovative activities . These modules can form specific training courses or be components of individual courses .

methods , forms and means of training is required for the implementation of the methodological system. These elements provide the procedural basis of education, determine the transfer of knowledge, skills and abilities to the field of professional activity, form needs and professional motives. Forms, methods and means of training chosen for the implementation of the methodological system must meet certain requirements:

1) compliance with the main principles of the developed concept of the methodical system;

independent educational activity of students provided for in the methodical system for the implementation of the “Digital technologies" module ;

3) of the audience compliance with the conditions for the development of personal potential of advanced training .

of training depends on the correct definition of its goals and content, as well as on the methods of achieving the goals . Method of qualification improvement is understood as " a system of purposeful actions of the listener that organizes knowledge and practical activities, ensures that he learns the content of education and thereby achieves the goals of professional development" [4].

There is a great variety of training methods and they can be classified in different ways depending on the characteristics of the classification.

As one of the most complete descriptions of the training methodology system E. Ya. Suggested by Golant. Training methods are divided into active and passive depending on the level of participation of students in independent educational activities . Passive methods include methods of listeners receiving various information from the teacher . When using active methods , listeners work independently with information.

There is a classification of training methods according to the sources of knowledge, which Ye.I.Perovsky and DOLordkipanidze divide into three groups : *verbal, visual and practical.* Groups of methods are based on certain types of knowledge sources. Oral the method uses printed and spoken word, visual methods are based on observation of events and processes , practical methods serve to acquire knowledge and develop skills.

BPYesipov and MADanilov developed a classification based on didactic goals. The researchers divided the methods into new knowledge acquisition methods , skill formation methods, knowledge application skills formation methods , acquired knowledge, skills and skills evaluation methods . This division is based on the use of different methods of developing students' independent learning activities in order to achieve didactic goals .

training methods based on the motivation of independent educational activity was presented by Yu.K.Babansky : methods of organizing independent educational activity, methods of stimulating educational and cognitive activity and quality control of educational and cognitive activity methods of making .

MNSkatkin and I. Ya. Lerner classified training methods according to the level of involvement of listeners in creative and effective activities . According to this classification methods are divided into explanatory and illustrative; reproductive; problem presentation method; partially exploratory; Research . These methods are the core of the activity of professor-teacher and listener , methods of activity and different forms of implementation.

An illustrative or informative-receptive method with explanation listeners perceive the information delivered by the professor - teacher using various means. Reproductive method according to a predetermined algorithm consists of repeating independent learning activities for listeners . Problem presentation of the studied material is used when the professor- teacher presents a problem to the audience , but at the same time, the professor- teacher shows the

possibility of solving the problem. shows methods . This method allows to show the process of scientific knowledge . The essence of the partial search (heuristic) method is that the teacher divides the problematic issue into several small problems, the search for their solutions is carried out by the listener . In the research method, the researcher is given a cognitive task, and solves it independently using appropriate methods. In this, the students gain experience in independent educational activities by mastering the methods of scientific knowledge .

Educational tools (didactic tools) play a special role in improving the qualifications of professional education specialists . In the field of digital technologies, training tools occupy one of the main places. Training tools are tools of activity that professors and trainees use to achieve training goals. According to NM Sh akhmaev, educational tools ensure the quality of training , help to form and develop the interests of the listeners , increase the visibility of the educational material, and ensure the openness of educational information. Educational tools perform important functions in the professional activity of a professor , they give him the opportunity to organize and control the process of professional development .

training tools are as follows:

• increasing visibility and openness of educational material for listeners ;

• t of consonants development of readiness for independent educational activities ;

• use of the information source , as a result of which the professor- teacher is freed from more non-creative work;

• organization of cognitive activity of t listeners .

Due to the diversity of content and methods of training, it is difficult to make a single classification of educational tools.

PIPidkasist says that a training tool is a material or ideal object used by professors and students to acquire new knowledge. These objects are divided into material and ideal. Material and technical means of qualification improvement include: textbooks, tables, models, educational and laboratory equipment, auditorium equipment, etc. Ideal teaching aids include oral and written speech, diagrams, drawings, graphs and charts, mnemonic rules for memorization, etc. The author draws attention to the fact that the effectiveness of learning depends on the optimal combination of material and ideal objects as educational tools. There is no clear line between tangible and ideal educational tools, so modern technical training tools do not always fit this classification.

V. Okon identifies six categories in the classification of didactic tools, groups them into simple and complex tools. Common training aids include verbal (printed texts, textbooks, study guides) and visual aids (maps, drawings, diagrams, models, etc.). Advanced educational tools are divided into mechanical visual aids (camera, microscope, telescope, etc.), hearing aids (recorder, radio, etc.), audio-visual aids that combine image and sound (television, film) and tools for automating the training process. (eg language laboratories).

Training tools can be classified on different grounds. For example, AVKhutorskoy offers the following classifications:

• according to the composition of objects - ideal (thought experiments, figurative images, models) and material (equipment, computers, classroom furniture);

• according to sources of occurrence - natural (herbariums, natural objects, drugs) and artificial (textbooks, maps, tools);

• by complexity - complex (computer networks, video recorders) and simple (models, samples);

• according to the method of use - static (slides) and dynamic (video);

• according to structural features - volumetric (structures), flat (maps), virtual (multimedia programs), mixed (models);

• according to the nature of exposure - auditory (radio, tape recorder), visual (visual aids, diagrams) and audiovisual (video films, televisions);

• by level of education - at the level of lessons (text of lectures , etc.), at the level of subjects (textbooks, educational manuals), at the level of the entire educational process (educational laboratories and educational rooms) [5].

educational tools developed by S. Ye. In this classification, educational tools are divided into the following types : visual, oral, technical and special:

• visual (diagrams, tables, multimedia presentations, etc.);

• verbal (written and spoken word, educational manuals and textbooks, electronic Internet resources);

• technical (projectors, CD and DVD players, multimedia computer equipment, etc.);

• special (laboratory and demonstration equipment, software).

The effectiveness of the implementation of the methodological system is also determined by the generality of the organizational forms of training . The listeners of the forms of organization of training and it is possible to consider the appearance of the joint activities of professors and teachers, which are carried out in a certain mode and according to a specified procedure . In this case, the form of organization is the content, means, methods, and forms of the qualification improvement process and determines the aspect determined by the types of professional development activities. MNSkatkin, I.Ya. Lerner and NASorokin provide a broader definition of the forms of professional development : the form of professional development is a defined regime and a certain order of the joint activity of students and professors in the process of professional development .

professional development process can be done on different bases.

VASlastenin defines two criteria for classification of training organization forms : the number of trainees and specific features of the training process management. According to these criteria, the following forms are distinguished: individual training , lecture -class system, lecture-seminar system.

training organization, AVKhutorskoy puts forward the differences in the communicative interaction of the main subjects of the training process. This classification includes individual training (independent education , etc.), collective-group training (class, lecture, seminar, practical training, excursions, etc.) and individual-group training systems (immersion, creative weekly) is different.

proposed a three-dimensional integrated model of the systematization of forms of training and organization based on the analysis of existing classifications . VI Andreev identified three categories of training organization forms: general, external and internal. General forms reflect the specific characteristics of the interaction between the participants of the pedagogical process and include: individual, pair, group, collective, frontal. External forms determine the characteristics of the transfer of educational material, such forms include: lecture, seminar, laboratory work, independent work, excursion , etc. Internal forms reflect the overarching goals of professional development . These include: an introductory lesson, a practical lesson, a lesson on systematization and generalization of knowledge, a lesson on controlling knowledge and skills, and combined forms of organizing lessons.

If the training process is provided not by separate forms of training organization, but by their well-thought-out, interconnected system, the implementation of a methodical system will be more effective , it will perform the following functions: educational, educational, organizational, developmental, systematizing, stimulating, coordinating, psychological.

As mentioned above, the methodological system also includes a diagnostic unit. This block is usually used in methodological systems of private methods . In our case, the diagnostic block of the model is the content block (professional , subject , methodical and creative) includes the methodology of developing students' independent educational activities according to the modules specified by Some methodological tools are needed for such diagnostics , their development is a separate methodological task.

Pedagogical process is the development of knowledge, skills and abilities of teachers and students . It is a purposeful, meaningful and organizationally formed interaction aimed at the other 's conscious and permanent mastering and formation of the ability to apply them in practice. Many scientists (RVGabdreev, N. L. Khudyakov, Ye. V. Yakovlev, etc.) devoted their research to modeling pedagogical processes. This is because: the model has a visual description - the structure, functions and relationships of its elements are highlighted; the model imitates reality, it is a copy of the pedagogical process; the model allows to study the process before it appears, to predict the results of the activity [6].

There are many definitions of the concept of " model " in the scientific literature . According to RVGabdreev , a model in the narrow sense is a mental image of the research object that is capable of noticing it, giving new information about it. According to VLShtoff's model, he understands a scheme that reproduces the original at different levels of similarity and replaces it in the process of cognition. Clarification of the components of the VLShtoff model,

predicting the result, process essence, structure and interdisciplinarity provides as a means of clarification . Therefore, a model in science is considered as an analog of a theoretical scheme, visual image, process, phenomenon.

According to VLShtoff, when choosing a model, it is necessary to rely on the following : the model should never be the same as the real object; some already known aspects of reality are usually not taken into account when building the model ; in the construction and use of the model, inferences are always used by analogy, as a path from the real object to the ideal and back; in the construction of a model, the existence of ideal objects in the possible world is always mentally repeated.

In the process of analyzing the scientific approaches to modeling, we see the significance of the model in pedagogical research is that it reflects an integral set of interrelated and reproductive elements of the model; elements and functions performed by the model; are the conditions for the implementation of the pedagogical model .

The analysis of scientific and pedagogical literature shows that modeling performs the following functions : knowledge related to revealing the essence of the process; related to research, hypothesis building, research organization; theoretical, reflective system connections; technological, reflecting the factors and conditions for the implementation of the pedagogical process; Normative defining the principles of pedagogical process management.

Among the external factors affecting the formation and implementation of our model, we included the following: D state requirements, which serve as criteria for the interaction between teachers and students during the training process ; society's requirements for the level of professional training of listeners .

model development and testing, we proposed an algorithm for building and testing this model . It contains the factors that led to the development of such a model and directly influenced it (State requirements and society's needs for competent specialists), as well as the main stages of creating the model (development of the content of the science program and independent study methodical support of the process of preparation for activity) is indicated. In the context of conducting pilot studies, the proposed sequence diagram of b iz reflects the relationship between the methodological support of the model and the results of pilot studies; and prepare for independent study activity directions of the process ; procedure for experimental work.

To define a model, we imagine its general components : the target component – determining the goals and tasks of preparing professional education experts for independent educational activities in the environment of digital training ; methodological component - approaches , principles ; meaningful component - the content of preparation for independent educational activity (science programs , methodical observation); technological component - structural structure of preparation for independent educational activities, stages of its formation, methods, tools ; assessment-resultative component - result component - criteria and stages

[7].of the level of development of preparation for independent educational activity in the trainees is carried out throughout the training process , as well as a final examination is conducted at the end of the training course . We use the following evaluation methods: terminological dictation, tests, bli s -questions, etc. The rating is done traditionally (unsatisfactory, satisfactory, good, excellent). After analyzing the received calculations, corrective measures are taken to eliminate gaps in knowledge, re-evaluation , etc.

Developed by us has integrity (interdependence and interaction of all its components , goals, content, organizational forms and methods), controllability (sensitivity to the influence of the teacher), changeability (the ability of the listener to supplement his knowledge, to expand and deepen it in accordance with the purpose), professional activity (to develop the readiness of listeners for independent educational activities, taking into account the professional requirements and needs of society). The integration of the model is manifested in the interdependence and interaction of all its components , the integration of goals, content, organizational forms and methods of developing the knowledge and skills of students .

We used the models of O.A.Qoysinov, D.O.Ximmataliev, O.X.Turakulov and others in the development of the model. We have developed the technological process and diagnostic assessment components of the model. Thus, in accordance with the selected approaches and principles, on the basis of the model, we understand the model, which includes purposeful , meaningful, technological- process and evaluative -resultative components . The model determines the internal and external factors that make up the system, determines the structure and composition of individual elements, which are placed on the structural elements of the system

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