



The Methodology of Experimental Work on the Training of Middle-Level Specialists in Vocational Education Based on the Competence Approach

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Abstract: *When organizing experimental work using this method, students of the veterinary faculty (by animal species) to what extent understand the essence of their professional activities, the development of their professional activities as future specialists and citizens, in general, their professional activities. there is an opportunity to assess the level of readiness. During the research period, in order to ensure the objectivity of the results of editorial observation, the level of knowledge obtained by students in the field of special sciences (veterinary microbiology) and professional sciences was also studied.*

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In Professional educational institutions, the following methods and tools were used to prepare future veterinarians for professional activities on the basis of virtual educational technologies:

1. Pedagogical observation is a pedagogical “method that carries out active acquaintance with phenomena and processes.” The advantage of the method is determined by the fact that it is carried out under the conditions in which observation is planned, observation does not change the current state (behavior)of the observed phenomenon and process. Observation can be carried out both on one individual and on a group of individuals. It is convenient to use this method in processes ranging from kindergarten groups to post-higher education social groups. Typically, the pedagogical observation method is organized using certain technological elements. these include:

- 1) the observation of a particular phenomenon, social presence and personality behavior is separated into certain parts and directions;
- 2) the scope, specifics, signs and elements of the observed pedagogical process are determined;
- 3) in the process of observation, specific aspects of the observed pedagogical phenomenon, state, signs and manifestations are noted;
- 4) the factors determined during the observation, the data obtained are analyzed, reanalyzed or statistically using mathematical formulas.

1. With the help of this method in the organization of pilot work, the opportunity arises to understand to what extent the students of the educational direction of Veterinary Medicine (by animal species) understand the essence of their professional activities, develop their professional activities as a future specialist and citizen, in general, to assess the level of their professional training. In order to ensure the objectivity of the results of pedagogical observation during the research period, the level of knowledge acquired by students in the subjects of expertise (veterinary microblogging) and

educational subjects of professional subjects was also studied. After all, within the framework of such disciplines, there is an opportunity to develop professional activity in students.

2. The questionnaire (French for "verification") is a method of asking students to obtain the necessary information about the knowledge of the community of students, to determine their opinions and views, and to determine the qualification for the profession. The questionnaire provides for purposeful questions, from the answers of which pedagogical results are derived. The method of mass collection of written answers is called the questionnaire method. The development of questionnaires is a complex scientific process. The reliability of the research results depends on the content of the questionnaires, the form of the questions asked." The effective use of this method in the process of organizing experimental work was aimed at identifying the ability of students of the educational direction of veterinary medicine (by animal species) to realize the essence of their professional activity at a fixed level, to understand its role and significance in the development of society. This method was also diagnostic in nature, allowing using it to get an idea of the state of manifestation of professional competencies of student respondents at the beginning and at the end of the experiment, to analyze the differences between them. In general, based on the nature of the process being studied, the questionnaire questions will be as follows:

- 1) open-ended questions (questions that allow respondents to answer freely, in detail);
- 2) closed-type questions (respondents answer questions by choosing answer options in the style of "Yes", "no", "partially" or "positively", "satisfactorily", "negatively", so on.)".

In the course of the control work, open-type questionnaires were used in order to correctly assess the level of representations, imagination of respondents-students in the direction of veterinary medicine (by animal species). In accordance with this, the students had the opportunity to answer the questions in detail.

Due to the fact that both teachers and students were involved in the experimental work, two types of questionnaire questions were developed.

3. The method of conversation is a question-answer of a dialogical nature, which is organized with the participation of respondents in order to identify the essential aspects, specifics of the studied pedagogical process, phenomena. This method is "used at different stages of the study." By the nature of the pedagogical control work, conversations can be an important component of the substantiating, formative and final experience. Effective use of the method guarantees the achievement of positive pedagogical results.

Conversational method in the organization of scientific research, not only shows a number of advantages, but also allows you to enrich the information obtained during the questionnaire surveys, to consolidate facts that also have certain limitations.

The use of conversational methods in preparing future veterinarians for professional activities on the basis of virtual educational technologies will help to get acquainted with their views on knowledge and skills in teaching using virtual educational technologies, determine their access to information about the factors, conditions that provide it, as well as correctly organize the educational process of Veterinary Medicine (by animal species). In the course of the interview, the respondent was able to analyze the basics of their success in the development of their professional activities by students, as well as the reasons for the difficulties faced.

Conversations were also organized with the participation of teachers participating in the control work, their opinions on the attitude of students to the development of their professional activities were studied. Because teachers are in constant communication with students, constantly monitoring their behavior and behavior. For this reason, no one can give more information about the readiness of students for professional activities who carry out their professional activities with the help of virtual learning technologies than the teachers who teach them.

4. An interview is a method that is organized in order to identify, with the help of questions and answers, the attitude of the respondents of the control work, participants of a particular event or

process to an event, phenomenon, as well as to an existing object. Usually, with the help of an interview, the participant's attitude to reality is investigated through thoughtful questions. Questions structured for interviews include a wide range of questions that shed light on the nature of the study, as well as questionnaire questions, and also ensure that the answers will also be ambiguous. "This approach to the interview method corresponds only to the first stage of the study, that is, the stage of initial acquaintance with the problem." However, the questions "compiled taking into account the respondents' knowledge of the structure and levels of the situations studied" provide "valuable results for determination" even at later stages.

When preparing future veterinarians for professional activity based on virtual learning technologies, a number of advantages of using the interview method were taken into account, such as the possibility of conducting heart-to-heart interviews. This method mainly formed a mutual opinion about the impressions received during the organization of training sessions, spiritual and educational activities, during which theoretical knowledge related to biological education was acquired.

During the interview process, the opportunity arose to determine the circumstances in which the feedback expressed by the respondents was necessary to focus on the next training sessions and the organization of spiritual and educational events. This in itself ensured that they were more efficient.

5. Training (from English. Train – "exercise") - group methods that serve to form an individual's knowledge, communication and skills, skills, organization of interaction of people in a certain social community. Social group discussions and role-playing games are widely used in the learning process. The main purpose of the trainings is: 1) Analysis of personal skills to organize general communication, interaction; 2) the development of individuals belonging to different social groups, the ability to organize special communication, mutual social communication."

In the course of the study, the training was used by student respondents in order to structure their feedback on the development of professional competencies based on virtual learning technologies. The advantage of the training is that with its help, in organized training sessions or spiritual and educational work, one gets acquainted with a group opinion composed of several persons, on the basis of which one can analyze how true or erroneous personal views are, freely express one's opinion and back it up with evidence. A series of practical exercises were used in the trainings organized during the pilot testing works. With the help of this practical exercise, the qualities that will be necessary for the development of the professional competence of the respondent students were brought up.

6. The method of pedagogical experiment (from Lat. "experiment") is used to explore the possibilities of finding a solution to the problem, the ability to guarantee the achievement of the goal by existing pedagogical conditions, to have their own perception of the recommendations issued in practice and to determine their effectiveness. The method of pedagogical experiment is used to study the possibilities of solving problems, to establish whether the existing pedagogical conditions can guarantee the achievement of the goal, whether the recommendations put forward can have their own perception in practice, as well as be effective. A pedagogical experiment aimed at finding a solution to a particular problem is conducted within a certain framework, with the participation of a certain number of respondents. The use of this method is necessary so that the researcher can determine and evaluate the effectiveness of the proposed special technique.

In the course of the study, the program of a special course and the methodology of preparing future veterinarians for professional activity based on virtual educational technologies through the organization of pedagogical experience were tested in practice. From the program of the special course and the structure of the methodology, theoretical data were taken that develop professional competencies of the student respondents, as well as practical exercises that serve to develop their knowledge and outlook on biological education. The content of the special course program and methods of preparing future veterinarians for professional activity based on virtual educational technologies, their introduction into the practice of professional educational institutions are described in detail in the second chapter of the work.

7. Mathematical-statistical method " experimental-test work is also used in general for the purpose of determining the degree of effectiveness of the study. Indicators representing the problem state are reanalyzed using special mathematical formulas. The final value is the main indicator that represents the effect of research. At the same time, when conducting research in the pedagogical direction, Styudent, Kivirlyag, Rokich, V.R.Bespalco, V.V.Grechixin " as well as the styling-Fisher techniques are widely used.

In the experimental work carried out on the path of preparing future veterinarians for professional activities on the basis of virtual educational technologies, the mathematical-statistical method served to assess the effectiveness of the Recommended program and methodology for testing. With it, the degree of assimilation, state of theoretical knowledge of the essence of professional competence and veterinary education was assessed by the respondent-students before and after the experiment. The results of mathematical-statistical analysis also ensured the formation of a conclusion on the effectiveness of the study.

Statistical characteristics of the quality of the formation of professional knowledge, skills and abilities of students under the research program of professional educational institutions allowed us to evaluate the effectiveness of the virtual teaching tools and the content of the methodology developed by us in special disciplines taught in the direction 03.01.00 - Veterinary Medicine (by animal species) (using the example of the science of veterinary microbiology).

The organization of training in specialist disciplines ("on the example of the science of Veterinary Microbiology") on the basis of Virtual educational tools made it possible to significantly increase the level of professional knowledge of students. The quality factor of the acquisition of students of the experimental group was 13.3% higher than that of the control group.

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