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## **USING THE VETERINARY CLINIC COMMUNICATION SIMULATION IN THE TRAINING OF FUTURE VETERINARY DOCTORS**

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A powerful potential for the development of professional competence of future veterinarians is the application of professional situations - situational tasks or problems that a veterinarian may face in his practice. Solving these tasks requires students to apply theoretical knowledge, analysis and critical thinking, make informed decisions and be able to apply them in practice. The solution of many situational tasks is related

to the analysis of specific situations that reflect what is happening in professional areas. Situational tasks are aimed at the implementation of functions, such as the organization of cognitive and independent activities, effective and corrective functions.

The source of the content of the practical lesson is the professional activity of the specialist, or more precisely, the professional tasks that make up the content of the professional activity. The ratio of the main sources of the situational problem can be different: practical situations reflecting situations of real life; learning situations, the main purpose of which is learning; scientific and research situations, oriented to the implementation of research activities. In our opinion, the requirements for the situational task include the same as a real professional situation; emerging professional conflict (controversial issue), tension of the situation (perhaps the urgency of the solution), complexity and ambiguity of the problem, clarity of description of the subjects of the problem or situation, multivariate solutions, limiting conditions.

The essence of using the situational problem method in the educational process is that each student or group offers different options for solving the problem, based on existing knowledge, real experience and intuition. Each situation usually has several solution options. During the discussion in the groups, the search and selection of the most optimal solution takes place by joint efforts. Let's consider examples of solving situational problems.

[www.ccsenet.org/jsd](http://www.ccsenet.org/jsd) Journal of Sustainable Development Vol. 8, No. 3; 2015

## 163 1.2 The Status of the Problem

Modern educational standards, involving a highly skilled worker, who is competitive in the labor market, competent, responsible, fluent in his/her profession and feeling confident in related fields of activity, as well as capable of effective creative jobs, require the inclusion of active and interactive methods of teaching in the educational process.

In the process of technical, technological and scientific training, the solution of problems is crucial, and represents a significant portion of disciplines, such as physics, mathematics, chemistry and their derivatives.

The solution and the problem analysis allow us not only to understand and remember,

but also to make sense from a practical point of view of the basic laws and formulas of the object, create an idea about their features and the boundaries of application. The problems develop skills in the use of general laws of the material world to address specific issues with practical and informative value. The educational problem is not only seen as a means to consolidate knowledge and skills, but also as the main means to form the basic concepts of mathematics and science disciplines and to develop creative thinking of students. The ability to solve problems is the best criterion for assessing the depth of studying the material and its acquisition.

The application of training tasks in the learning process, their classification, problem functions were considered

in the works of psychologists and didacts G. A. Balla, G. D. Bucharova, I. K. Zhuravleva, Z. I. Kalmykova, V. V. Larionov, A. N. Leontyev, I. Ya. Lerner, M. I. Makhmutova, N. A. Menchinskaya, A. A. Tolstenova, L. M.

Friedman, and others (Ball, 1990; Buharova, 1996; Kalmikova, 1981; Larionov, 1998; Leontiev, 1983; Lerner, 1969; Makhmutov, 1975; Tolsteneva, 2008; Friedman, 1977).

The results of final examinations in high comprehensive schools, of entrance and current exams in universities, the overall results of national testing and the unified state exam (USE) show that the process of solving problems is a weak link in the study of natural science and mathematical subjects.

Thus, there is a contradiction between the high level requirements of modern society to the quality of training competent professionals and the low level of practice-oriented activities of students in the subject area of natural sciences and mathematical disciplines at a high potential task-based method using situational problems as a means of forming the professional competencies.

### 1.3 The Research Hypothesis

A distinctive feature of the competence-based approach is the formation of abilities to use knowledge in practice, the lack of tight binding to the specific object and the subject of labor that ensures the mobility of the future specialists in the changing conditions of the modern labor market. The manifestation of professional

competencies involves continuous renewal and growth of professional knowledge, acquirement of new information for the successful solution of professional tasks under the specified conditions.

The efficiency of the process of forming professional competencies will be significantly improved, if in the process of professional training of a student to include a set of situational problems, created on the training content, the real issues and emerging professional situations.

Situational problems allow integrating the totality of a student's knowledge, expanding his/her educational space and awareness, contributing to the definition and understanding of interdisciplinary connections, the system of interaction between science, practice and professional activities.

The solution of situational problems, based on the involvement of a student in active learning, allows learning to use knowledge creatively and actively.

1. Diagnostic simulations. Use virtual simulations to practice diagnosing and treating various animal health conditions. Students can interact with virtual patients, review medical histories, perform physical exams, and order diagnostic tests to arrive at a diagnosis. This helps them develop critical thinking and decision-making skills in a controlled and realistic environment.

2. Surgical simulations. Virtual simulations can provide a safe space for veterinary students to practice surgical procedures. They can learn surgical techniques, such as spaying/neutering, orthopedic surgeries, and wound management, through interactive simulations that mimic real-life scenarios. Students can gain hands-on experience and improve their surgical skills without the risk of harming real animals.

3. Anesthesia management. Virtual simulations can be used to train veterinary students in anesthesia management. Students can practice administering anesthesia, monitoring vital signs, and responding to anesthesia-related complications in a virtual environment. This helps them develop confidence and competence in handling anesthesia during actual veterinary procedures.

4. Emergency medicine simulations. Simulated emergency scenarios can be created to prepare veterinary students for high-pressure situations. Students can

practice triaging and providing immediate care to simulated patients experiencing conditions like trauma, poisoning, or respiratory distress. These simulations help students improve their decision-making skills, teamwork, and ability to handle emergencies effectively.

5. Animal handling and restraint. Virtual simulations can provide hands-on training in animal handling and restraint techniques. Students can learn how to safely approach and handle different animal species, practice proper restraint methods, and understand the principles of low-stress animal handling. This type of training reduces the risk of accidents and improves the welfare of both students and animals.

6. Client Communication and Education. Virtual simulations can be used to enhance students' communication skills with clients. Simulated scenarios can involve interacting with virtual pet owners, discussing diagnoses, explaining treatment plans, and addressing client concerns. Students can practice effective communication, empathy, and client education, preparing them for real-life veterinary practice.

7. Zoonotic disease management. Virtual simulations can be designed to educate veterinary students about zoonotic diseases and their management. Students can explore virtual environments representing various settings, such as farms, zoos, or public health clinics, and learn how to identify, prevent, and control zoonotic diseases. This training is crucial for future veterinarians who play a vital role in safeguarding public health.

8. Radiology and imaging interpretation. Virtual simulations can provide a platform for veterinary students to practice interpreting radiographic and imaging studies. Students can review digital images, identify abnormalities, and make diagnoses in a simulated environment. This type of training helps to develop their diagnostic skills and improves their ability to analyze and interpret imaging results accurately.

9. Laboratory skills training. Virtual simulations can be used to teach laboratory techniques commonly used in veterinary medicine. Students can practice sample collection, laboratory testing procedures, and interpreting laboratory results in a virtual lab setting. This training allows students to gain proficiency in important

laboratory skills without the need for physical laboratory resources.

10. Clinical rounds and case discussions. Virtual simulations can facilitate clinical rounds and case discussions, where students can collaborate with peers and faculty members. Students can review patient cases, discuss diagnostic approaches, and formulate treatment plans together. Virtual platforms provide a space for active learning, peer interaction, and the exchange of ideas, enhancing students' clinical competence and teamwork skills.

It's important to note that while virtual simulations can provide valuable training experiences, they should not completely replace real-life clinical experiences. Hands-on, practical training under the supervision of experienced professionals remains essential in veterinary education. Virtual simulations should be used as a complementary tool to enhance learning and practice.

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