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DEVELOPMENT OF STUDENTS' PROFESSIONAL COMPETENCES BASED ON IMITATIONAL MODELS - A FACTOR FOR IMPROVING THE QUALITY OF EDUCATION

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Abstract: This article analyzes the issue of developing students' professional competencies based on imitative models. The theoretical and practical aspects of imitative teaching, their role in improving the quality of education are considered. Methods of forming professional competencies using virtual simulations, role-playing games and technological platforms are analyzed. The results of the study are aimed at determining how imitative models affect the educational process and providing recommendations for their effective implementation.

Keywords:imitative models, professional competence, innovative education, virtual simulation, interactive teaching.

The introduction of innovative approaches in the modern education system plays an important role in increasing the level of professional training of students. Today, students are required not only to acquire theoretical knowledge, but also to be able to apply it in practical activities. Therefore, the methodology of teaching based on imitative models is considered one of the effective means of forming professional competencies. Simulation models are interactive educational methods aimed at simulating real-life work situations and preparing students for professional activities through simulations, which allow students to develop their professional skills, improve their analytical thinking skills, and gain experience in solving problems. This approach improves the quality and efficiency of the educational process, as students have the opportunity to consolidate their knowledge in situations close to real life.

One of the greatest advantages of teaching based on simulation models is that students can master knowledge related to their specialty through direct practical training and gain experience in applying this knowledge. For example, students studying in the medical field can practice the process of treating patients using simulation models. By simulating virtual operations, interactive diagnostic methods, and medical procedures, students are prepared for situations that they will encounter in real medical institutions. Students studying in the engineering field gain practical experience in modeling technological processes, designing structures, and solving engineering problems using software. In the field of business and economics, simulation models are used to study tasks such as analyzing market conditions, managing a company, and developing financial strategies. Thus, learning based on simulation models helps students adapt to real work conditions and improves their professional skills. In most cases, in traditional educational methods, students acquire more theoretical knowledge, but do not have the opportunity to apply it in a real environment. This approach is not effective enough in shaping students as specialists who can fully meet the requirements of the labor market. Therefore, organizing the educational process based on simulation models is considered an important factor in the development of professional competencies. In this model, students are

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trained in an environment where they are supervised by teachers, but have the opportunity to make independent decisions and solve problems. At the same time, during the process of learning based on imitative models, students can experience real-life difficulties and problems and improve their skills in solving them.

To increase the effectiveness of training based on imitative models, it is necessary to widely use modern technologies. In particular, the use of virtual reality (VR), augmented reality (AR) and artificial intelligence (AI) technologies can make the learning process more interactive and effective. For example, VR technologies allow students to engage in practical training on laboratory experiments, working with complex mechanisms or in dangerous conditions. AR technologies, on the other hand, make the learning process more effective and interesting by adding additional information to the real environment. Educational platforms based on artificial intelligence can provide educational materials adapted to each student, taking into account their individual characteristics. Such technologies, while increasing the effectiveness of training based on imitative models, serve to prepare students for the labor market of the 21st century. Another important aspect of training based on imitative models in the development of professional competencies is the formation of teamwork skills among students. Teamwork and collaborative decision-making are important in many professional fields. Simulation-based learning methods teach students to work in teams, solve problems together, and exchange ideas in various professional situations. For example, students studying business administration or project management can conduct training in company management, strategic planning, and problem solving in a simulation environment. Such learning processes serve not only to consolidate students' theoretical knowledge, but also to develop their teamwork skills. In order to improve the quality and effectiveness of education, teachers need to thoroughly study and apply the methodology of teaching based on simulation models. Therefore, teachers need to constantly improve their skills and master new pedagogical technologies. At the same time, the technical infrastructure necessary for training based on simulation models should also be developed. In particular, it is important that educational institutions are equipped with advanced technologies, that curricula are developed based on modern requirements, and that innovative platforms are introduced aimed at creating real working conditions for students. In conclusion, teaching based on imitative models is an important component of the modern education system, which serves to effectively prepare students for professional activity. This method increases the interactivity of the educational process, helps students connect their knowledge with practice, and contributes to the development of their professional competencies. In the future, it will be possible to further increase the level of professional training of students by further developing and widely introducing teaching technologies based on imitative models into the educational process. Therefore, the development of innovative approaches in the education system and their widespread implementation remains one of the important tasks. Preparing students for professional activity is one of the important tasks in the modern educational process. The rapid development of the labor market, the widespread introduction of innovative technologies, and increasing competition require students to acquire practical skills in addition to theoretical knowledge. In such conditions, the method of teaching based on imitative models is emerging as one of the most effective approaches to developing professional competencies. This methodology serves to improve the quality of education by introducing interactivity into the learning process, modeling real professional situations, and allowing students to test their knowledge in practice.

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One of the biggest advantages of learning through simulation models is that it prepares students for real-life situations. While traditional teaching methods are usually focused on imparting theoretical knowledge, simulation learning creates a practical experience for students. For example, in the medical field, by working with virtual patients, students develop the skills to manage complex medical situations and make the right decisions. In the engineering field, by simulating technological processes, students learn to solve problems that they may encounter in real production conditions.

Another important aspect of the simulation learning methodology is the development of teamwork skills. Many professional fields require teamwork, collaborative problem solving, and coordinated activities. Learning through simulation models helps students develop communication, collective decision-making, and exchange of ideas skills. This is one of the important skills necessary for their successful functioning in the labor market.

Imitative models also allow for the widespread introduction of advanced technologies in the educational process. Using virtual reality (VR), augmented reality (AR), and artificial intelligence (AI) technologies, it is possible to further enliven the educational process and allow students to immerse themselves more deeply in the learning process. For example, VR technologies allow students to engage in complex laboratory experiments or conduct training on working in hazardous environments. AR technologies, on the other hand, make educational materials more understandable and interesting by adding interactive elements to the real environment. In order to effectively introduce imitative models into the educational process, it is important to improve the skills of educators and train them in innovative methodologies. Teachers must have sufficient knowledge and experience in the use of imitative technologies. At the same time, great attention should be paid to practical exercises and interactive tasks when developing curricula. Because, along with theoretical knowledge, students must also master the skills to solve real-life situations.

References:

- 1. Anderson, J. R. (2018). Cognitive psychology and its implications (9th ed.). Worth Publishers.
- 2. Kolb, D. A. (2015). Experiential learning: Experience as the source of learning and development (2nd ed.). Pearson Education.
- 3. Mayer, R. E. (2020). Multimedia learning (3rd ed.). Cambridge University Press.
- 4. Schunk, D. H. (2019). Learning theories: An educational perspective (8th ed.). Pearson.
- 5. Wilson, K., & Korn, J. H. (2017). Immersive learning and simulation-based education: Strategies for engagement. Routledge.