THE USE OF ARTIFICIAL INTELLIGENCE FOR THE FORMATION OF PROFESSIONAL AND TERMINOLOGICAL COMPETENCE IN ENGLISH CLASSES FOR FUTURE VETERINARIANS

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Abstract. The paper describes the potential of using artificial intelligence (AI) in foreign language teaching in the formation of professional and terminological competence of future veterinarians. In our study, artificial intelligence (AI) is understood as a system of computerized tools used in the educational process and aimed at facilitating and improving the work of a teacher, as well as generating interest in learning on the part of students. The use of AI allows foreign language teachers to qualitatively change the content, methods and organizational forms of education in order to strengthen the intensification of the learning process and improve the quality of education. The possibilities of using artificial intelligence in the process of teaching a foreign language to future veterinarians are characterized. They are: terminology and language resources, language proficiency assessment, simulations and virtual training, machine translation, data analysis and research, virtual collaborative platform, collaborative learning. It has been established that the possibilities of using AI to form the professional and terminological competence of future veterinarians in English classes can significantly facilitate the learning process and increase the efficiency of mastering special terminology.

Keywords: artificial intelligence, future veterinarians, professional and terminological competence, English classes.

Introduction. Integration into the international economic and information space predetermines the need to find new approaches to teaching foreign languages to future specialists in accordance with international standards of language competence. Fluency in terminology for future professionals is a condition for successful professional activity. The research of scientists and the experience of working in a non-linguistic university indicate that the level of formation of professional terminological competence among future specialists is not high enough. This can be explained by a number of reasons: the lack of modern teaching aids, the practical underdevelopment of foreign language teaching methods in the context of the implementation of professional activities in the information and educational environment, the previously existing relative lack of demand for a foreign language in the professional activities of specialists. It follows that the student must be taught to use a foreign language as a tool for critical analysis, scientific research, experimentation and cooperation, a source of information within the profession required for a successful existence in a modern multicultural information society. To solve the tasks outlined, the structure of the course "Foreign Language" in a non-linguistic university should be built in such a way that it allows the use of effective teaching technologies that correspond to the trends of the times, namely new information technologies. Reserve for increasing the effectiveness of teaching foreign languages in a non-linguistic
university in the integrated use of traditional teaching aids and new information technologies tools, which are a full-fledged component of the training system. The penetration of new information technologies into the field of education allows foreign language teachers to qualitatively change the content, methods and organizational forms of education in order to strengthen the intellectual capabilities of students in the information society, humanize, individualize, intensify the learning process and improve the quality of education at all levels of the educational system.

**Literature Review.** Nowadays, the problem of formation of professional and terminological competence remains the subject of active discussions among scholars and linguists. L. Baranovska, V. Borschchovetska, L. Viktorova, A. Demin, Z. Hyrych, N. Holub, G. Onufrienko, I. Drozdova, M. Guts made an important contribution to the development of issues of forming professional and terminological competence. Some aspects of forming the terminological competence of future agrarian specialists and the substantive aspect of the formation of professional and terminological competence in future veterinarians by means of a foreign language were investigated by O. Syrotin [3, 4, 7]. Morphological peculiarities of veterinary terminology in the context of teaching English for specific purposes were the subject of research by T. Cherepovska, O. Binkevich [5]. Having analyzed the modern theory and practice of speech training of university students, we note that the problem of forming the professional and terminological competence of future veterinarians has not yet been the subject of a separate scientific study. The problem of enriching the professional speech of future veterinarians with English professional terminology using elements of artificial intelligence and information and communication technologies requires a detailed study.

**The aim** of the paper is to reveal the possibilities of using elements of artificial intelligence in the process of forming the professional and terminological competence of future veterinarians in English classes.

**Study material and methods.** During the work on the study, such research methods as the method of analysis and synthesis of scientific literature were used to understand the essence of the problem. Sufficient materials of philosophical, sociological, methodical, pedagogical literature on the researched problem were developed to understand the study topic.

**Discussion and results.** In the modern system of training in higher education, the issues of using artificial intelligence can significantly expand the possibilities of training future specialists in the field of language. In order to deal with the presented issues, it is necessary to understand what intelligence is. There is no consensus on the term "artificial intelligence" (AI) in modern science. It can be considered as the science of systems capable of actions that would seem intelligent to any observer. Artificial intelligence involves the use of methods created on the basis of intelligent behavior of people and animals to solve complex problems [6, p. 4].

The basic classification of all aspects of the term was suggested by Y. Petrunin: “1. scientific directly, to put oneself behind the meta model of the processes of knowledge and understanding, the choice of methods for solving problems, like a stagnant person, to improve the productivity of computational technology; 2. different accessories, mechanisms, programs, which, for the same or other criteria, can be called intellectual; 3. the order of knowledge about knowledge, the mind of that person, which allows the very setting of nutrition about modeling the intellect” [1,
The work of A. Levchuk is devoted to the study of artificial intelligence in the linguistic aspect [2].

In our study, AI is understood as a system of computerized tools used in the educational process and aimed at facilitating and improving the work of a teacher, as well as generating interest in learning on the part of students. The use of AI to build professional and terminological competence of future veterinarians in English classes can provide valuable tools and resources for teaching and developing students.

Under professional and terminological competence we understand the ability aptly and expediently used technical terms, knowledge of logic statements and structure formulations, acquired skills and skills are grammatically correct build sentences and own dialogue in situations of professional communication, based on the experience gained in the study process of professional disciplines at the university, at thus motivating himself with conformity chosen profession and high results in professional activity and understanding that the key to success is constant practice of skills and self-development of the individual [3, p. 59].

Terminological vocabulary is necessary for students, first of all, when reading special texts by specialty for the purpose of obtaining professional information, for conducting a professionally oriented conversation or discussion with foreign specialists, as well as when writing an abstract or message. The study of terminological vocabulary in teaching a foreign language of professional direction will be more successful and effective, the better the choice of foreign professional material involved in the educational process is made. The use of AI allows foreign language teachers to qualitatively change the content, methods and organizational forms of education in order to strengthen the intensification of the learning process and improve the quality of education at all levels of the educational system. The AI application in the process of forming the professional and terminological competence of students allows us to solve several problems: 1) optimize the learning process; 2) improve the quality and intensification of teaching a foreign language; 3) give the opportunity to communicate with native speakers; 4) increase motivation to study foreign languages; 5) provide an opportunity to receive the latest information and teach the skills of its assessment and analysis.

The applying AI can have a significant impact on forming the professional and terminological competence of future veterinarians in English classes. Here are some examples of using AI in this context. AI-powered platforms can provide comprehensive databases and resources that cover veterinary terminology and specialized vocabulary. These resources can include glossaries, dictionaries, and terminology banks specifically tailored to the veterinary field. AI algorithms can continuously update and expand these resources, ensuring that students have access to the most relevant and up-to-date information. AI can assist in evaluating students' language proficiency and identifying areas for improvement. Automated language assessment tools can analyze students' written and spoken responses, providing feedback on grammar, vocabulary, and pronunciation. This feedback can help students gauge their language skills and work towards enhancing their professional competence in English. AI can facilitate realistic simulations and virtual training experiences for future veterinarians. Virtual reality and augmented reality technologies can create immersive scenarios that replicate veterinary practice environments. Students can engage in interactive exercises, such as diagnosing and treating virtual animal patients, while utilizing veterinary terminology in a practical context. AI can create virtual
environments and simulations that allow students to practice using professional terminology in English. Virtual environments and simulations created using AI can provide students with the opportunity to practice using professional terminology in English in realistic scenarios. For example, students can interact with virtual patients or environments simulating veterinary clinics and apply their knowledge and terminology to diagnosis and treatment. Here are some examples of exercises using virtual simulations for the practice of terminological competence of future veterinarians in English.

1. Virtual patient examination: Students are offered a virtual simulation in which they are required to examine a virtual patient in English. They must ask questions of the patient, take measurements, evaluate health conditions and write reports in English using professional terminology.

2. Diagnosis and treatment: Students are provided with a virtual simulation case in which they must diagnose the disease and suggest the appropriate treatment in English. They must analyze the clinical history, interpret test results, write diagnostic reports, and offer medical advice using specialized terminology.

3. Communication with patient owners: The virtual simulation may offer a scenario in which students need to communicate with pet owners in English. They should ask questions about the condition of the animal, explain diagnoses, talk about treatment and give advice. The exercises may include simulated telephone conversations or virtual interaction via chat or email.

4. Work in a veterinary clinic: Students are offered a virtual simulation that simulates working in a real veterinary clinic in English. They must perform various tasks such as filling out medical records, compiling operational reports, recording lab results, and communicating with colleagues and patients.

5. Emergencies: The virtual simulation can represent an emergency situation, such as the need for first aid or resuscitation on an animal in English. Students will be presented with a variety of simulated scenarios in which they must take hemorrhage control measures, administer artificial respiration, perform cardiopulmonary resuscitation and communicate with the rescue team in English. These examples of exercises with virtual simulations will help veterinary students to practice the use of professional terminological competence in English in realistic and controlled environments. Such exercises help to improve the communication and professional skills of students, preparing them for real situations that they will face in their future veterinary practice.

AI algorithms can analyze students' learning patterns, preferences, and performance data to provide personalized content recommendations. AI can suggest relevant reading materials, videos, and resources that align with students' interests and learning goals. This personalized approach can enhance students' engagement and motivation in acquiring professional competence. AI-based speech recognition technology can be utilized for language practice and pronunciation improvement. Students can engage in speaking exercises or role-playing scenarios, and AI systems can provide real-time feedback on their pronunciation accuracy and fluency. AI-powered NLP techniques can be used to analyze and extract information from veterinary texts, such as research papers, case studies, and medical records. This enables students to develop skills in reading and comprehending specialized veterinary literature, improving their terminological competence and understanding of professional concepts. AI-based speech recognition technology can be utilized for language practice and
pronunciation improvement. Students can engage in speaking exercises or role-playing scenarios, and AI systems can provide real-time feedback on their pronunciation accuracy and fluency. This helps students refine their communication skills and develop professional spoken English. AI-powered machine translation systems can assist students in translating veterinary literature or research papers from different languages into English. This enables access to a broader range of resources, helping students expand their knowledge and understanding of veterinary terminology across different linguistic contexts.

AI algorithms can be employed to analyze large datasets, such as veterinary patient records or research data, to extract meaningful insights and patterns. By exposing students to real-world data analysis scenarios, AI can enhance their understanding of veterinary concepts and terminology in a practical and research-oriented context. AI can support collaboration among students by providing virtual platforms that facilitate group discussions, knowledge sharing, and peer feedback. These platforms can incorporate language learning features, such as vocabulary banks, chat functionalities, and collaborative editing tools, which help students develop their professional competence in English while working together on veterinary projects or assignments.

**Conclusion.** The study conducted in this paper has shown that the possibilities of using artificial intelligence to form the professional and terminological competence of future veterinarians in English classes can significantly facilitate the learning process and increase the efficiency of mastering special terminology. This can help students become more sought-after and successful professionals in their field. It’s important to note that while AI can be a valuable tool, it should not replace human instruction and mentorship. Educators and professionals in the veterinary field play a crucial role in guiding students, providing context, and facilitating discussions that go beyond language proficiency, helping future veterinarians develop their professional competence in English.

**Список використаних джерел**


**References**

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ВИКОРИСТАННЯ ШТУЧНОГО ІНТЕЛЕКТУ ДЛЯ ФОРМУВАННЯ ПРОФЕСІЙНО-ТЕРМІНОЛОГІЧНОЇ КОМПЕТЕНТНОСТІ МАЙБУТНІХ ВЕТЕРИНАРІВ У ПРОЦЕСІ НАВЧАННЯ АНГЛІЙСЬКОЮ МОВИ
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Анотація. У статті описано потенціал використання штучного інтелекту (ШІ) для формування професійно-термінопологічної компетентності майбутніх ветеринарів у процесі навчання іноземної мови. У нашому дослідженні під штучним інтелектом (ШІ) розуміється система комп’ютеризованих інструментів, які використовуються в навчальному процесі та спрямовані на полегшення та вдосконалення роботи викладача, а також на формування інтересу до навчання з боку студентів. Використання ШІ дозволяє викладачу іноземної мови якісно вдосконалювати навчання, методи та організаційні форми навчання з метою посилення інтенсифікації процесу навчання та підвищення якості освіти. Схарактеризовано можливості використання штучного інтелекту в процесі навчання іноземної мови майбутніх ветеринарів. До них належать: термінологія та мовні ресурси, оцінка володіння мовою, моделювання та віртуальне навчання, машинний переклад, аналіз даних та дослідження, віртуальна платформа для спільної роботи, спільне навчання. Встановлено, що можливості використання ШІ для формування професійно-термінопологічної компетентності майбутніх ветеринарів на заняттях з англійською мовою можуть значно полегшити процес навчання та підвищити ефективність оволодіння спеціальною термінопологією.

Ключові слова: штучний інтелект, майбутні ветеринари, професійно-термінопологічна компетентність, заняття з англійською мовою.