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APPLICATION OF GRAMMARLY IN ENGLISH FOR PROFESSIONAL PURPOSES CLASSES

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INTRODUCTION

The article discusses the application of artificial intelligence elements through the Grammarly program for university students in English language classes for professional purposes. Artificial intelligence uses its algorithm and databases to analyze information and generate responses to questions indicated by students. This can involve processing large amounts of data and generating results. Based on the definition of meanings, students must clearly understand and formulate specific questions that require answers. These questions should be precisely formulated and be able with the context of the Grammarly program. With the help of a professional teacher, students should learn not only to obtain information in response to their questions but also to analyze and evaluate the answers provided by artificial intelligence, interpreting them according to the real conditions of the tasks, which they have. It is necessary to improve the formation of a clear algorithm, determining subsequent actions based on the results obtained, regarding the need to clarify or adjust the question to achieve more accurate results. If the answers from artificial intelligence are satisfactory, the results are used to implement relevant actions or decisions. The article emphasizes the importance of using Grammarly as a modern tool to ensure a professionally-oriented approach to foreign language learning.

1. The problem's prerequisites emergence and the problem's formulation

Artificial intelligence is one of the most anticipated topics in technological communities, which can contribute to expanding opportunities in the process of educating university students. Today, the value of artificial intelligence for both teachers and students has become relevant for various reasons. Volumes of information exceed human capacity for assimilation and interpretation when making complex decisions. Currently, modern companies, such as OpenAI, announce the operation examples of the SearchGPT system, which is based on artificial intelligence[1]. This is a test

[1] Chung W. Artificial Intelligence in Higher Education: Challenges and Opportunities. *Computers & Education*. 2021; 169:104211.

version, which serves as a prototype for new search features, such as the integration of artificial intelligence models with real-time information from the internet. The SearchGPT will be a more interactive and intelligent product compared to traditional search engines. Users will be able to engage in dialogue with the system, ask clarifying questions and receive accurate and relevant answers.

Let's consider the set of tools necessary for working with machine learning:

Scikit-learn: Scikit-learn is one of the most popular machine learning libraries for the Python programming language. It contains various supervised and unsupervised learning algorithms, as well as tools for data preprocessing.

TensorFlow: TensorFlow is an open-source library for machine learning and deep learning, developed by Google. It provides tools for building and training neural networks, as well as solving various machine learning tasks. Keras: Keras is a high-level interface built on top of TensorFlow that allows for easy construction and training of neural networks.

PyTorch: PyTorch is another open-source library for machine learning and deep learning, developed by Facebook. It has dynamic compilation, which allows for easy creation and training of neural networks. Microsoft Azure ML: This is a machine learning and artificial intelligence platform developed by Microsoft. It allows for the easy development, training, and improving of machine learning models in a cloud environment[2]. XGBoost: XGBoost is an efficient library for gradient supporting, used for various machine learning tasks, including classification and regression problems[3].

H2O.ai: H2O.ai is a distributed machine learning tool that offers a wide range of algorithms and tools for data analysis.

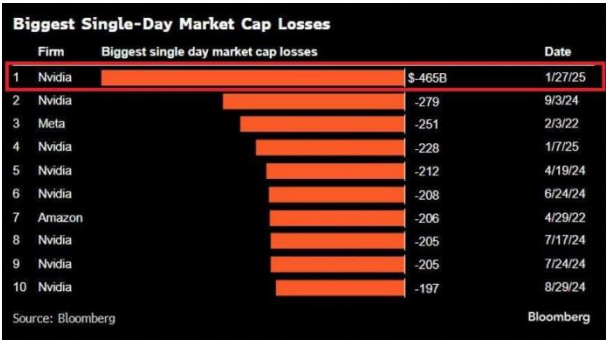
Grammarly: Grammarly is an AI-based bot developed using neural networks and machine learning. The chatbot engages in communication, imitating human language and understanding the context of conversations based on language models designed to process natural language, and learns through the use of large data sets. Big language models can predict the next words, thus creating text that appears connected and logical. The more parameters contained in the program's database, as the result – the more effective it is. For instance, the Grammarly chatbot model consists of 175 billion parameters[4].

[2] Zhang J., Yang Y. Machine Learning for Educational Data Mining: Tools and Techniques. *Educational Technology Research and Development*. 2020; 68(4):2151–2172.

[3] Li Z., Ma J. The Impact of Artificial Intelligence on Education and Learning: A Systematic Review. *Journal of Educational Technology & Society*. 2021; 24(2):129–142.

[4] Guszcza J., Yoon H. AI-Powered Learning Systems: Trends and Future Applications. *IEEE Access*. 2022; 10:1534–1547.

2. The analysis of existing methods for solving the problem and formulating a task for the optimal technique development



On January 27, 2025, Nvidia's stock dropped by 13%, resulting in a market capitalization loss of $465 billion – the largest single-day decline in U.S. stock market history. This was triggered by news about the Chinese startup DeepSeek, which developed an artificial intelligence model

comparable to Western counterparts, costing less than $6 million. In comparison, companies like OpenAI and Google are spending billions of dollars to develop similar models. DeepSeek managed to train its model without using advanced Nvidia chips, raising doubts about the need for large investments in AI infrastructure and negatively impacting Nvidia's business model, which relies on the sale of powerful graphics cards and chips. The news caused panic in Silicon Valley: the Nasdaq index dropped by 3.5%, equivalent to a $1 trillion loss in market value. Shares of companies like Microsoft, Meta, and Tesla also significantly declined. The DeepSeek reach quickly popularity, topping the charts in the U.S. and U.K. stores, surpassing ChatGPT, in spite of fact, that Italy banned the use of DeepSeek. This event forced investors to review the effectiveness and cost of artificial intelligence research.

As Bloomberg informed, that a new artificial intelligence model from the Chinese startup DeepSeek has caused a $1 trillion drop in the stock value of technological companies in the U.S. and Europe[5]. This AI demonstrates higher economic efficiency while operating on less powerful chips, raising doubts about the justification for high valuations of companies like Nvidia,

[5] Nasdaq futures slump as China's DeepSeek sparks US tech concern [Електронний ресурс]. *Bloomberg*. 27.01.2025. Режим доступу: http://www.bloomberg.com/news/articles/2025-01-27/nasdaq-futures-slump-as-china-s-deepseek-sparks-us-tech-concern (дата звернення: 17.11.2025).

whose stock has fallen by more than 16% today (the largest drop since March 2020).

By the way, interesting fact! Is it possible to generate visual images from text based on specific scenarios? Guess who is it? This image is meant to pay your attention. Its author of this picture stated that this is the best picture showing the topic of Mr. Freeman using text descriptions. Black and white graphic character, egg-shaped head with black eyes in the form of large eye sockets and a black mouth, the body is completely black and the bottom of the body is rags like a rag, from under which legs grow, arms and legs in the form of black hoses, legs without fingers just feet. Is it possible to come up with better one?

The purpose of this article is to explore the language support of artificial intelligence and the use of its tools as Grammarly for translating terminology in specific fields. The object of this study is artificial intelligence tools, so it seems reasonable to review the current directions of its development and

general issues related to the development of AI. Since AI interacts with almost all areas of knowledge, we will look into research results related to IT.

The task of this article is to theoretically justify and systematize the theoretical components of applying artificial intelligence in the context of using AI tools like Grammarly in English for Professional Purposes lessons. The goal of the article is to define the main objectives and means of applying artificial intelligence to prepare students for professional communication activities in English.

Let's consider the capabilities of the Grammarly program: The Grammarly chat is capable of transforming texts[6]. It does not create copy-paste responses; its generated response is completely new. Grammarly operates in the form of dialogue and is able to respond in almost any language. Thanks to this, people from various professional purposes successfully use the chatbot: copywriters, journalists, translators, marketers, SEO specialists, programmers, developers, analysts, students, teachers, and researchers.

For these users, the program writes texts for websites, term papers, essays, assignments, makes translations, generates emails, and creates resumes, speech scripts, graphs, charts, and other supporting materials.

There are main reasons why Grammarly can be indispensable tool for teaches and students:

Personalized learning: Generative AI tools can be used to create personalized learning plans for each student, based on individual needs and interests. This helps students achieve their learning goals faster and more efficiently[7].

Flexible learning: Generative AI tools can be used to create flexible learning opportunities that allow students to learn anytime and anywhere. This can include online learning, distance learning, and mobile learning.

Inclusive learning: Generative AI tools can be used to create an inclusive educational environment for all students, regardless of their abilities or needs.

Task automation: Generative AI tools can be used to automate tasks currently performed by teachers, such as grading assignments and providing feedback.

[6] Ally M., Tsinakos A. The Role of Artificial Intelligence in Education: Current Uses and Future Prospects. *Education and Information Technologies*. 2021; 26(4):4089–4107.

[7] Liu Y., Lin J. Personalized Learning Using Artificial Intelligence in Higher Education: Opportunities and Challenges. *Journal of Educational Technology & Society*. 2020; 23(2): 65–77.

Development of learning materials: Generative AI tools can be used as assistants for creating learning materials that are tailored to the individual needs of students[8].

Student learning: Generative AI tools can be used to help students acquire new skills and knowledge[9].

Computerized learning in professional-oriented English classes is based on principles such as:

Individualization – the ability to work individually with each student, taking into account their abilities, knowledge level, skills, and competencies.

Differentiation – providing the opportunity to choose which option suits the student: text, interactive program, courses on the platform, etc.

Intensification – various methods of presenting educational material and structuring it with a wide range of interactive work types and forms.

Among the main didactic functions that can be implemented through computer technologies, the following should be noted:

Cognitive: For example, using computer technologies and tools (such as Chat GPT, Gemini, Dall-E)[10].

Developmental: Students' work with the educational program not only activates vocabulary but also contributes to the development of essential cognitive processes such as perception, logical thinking, memory, and imagination.

Training: Through computer programs, students can independently practice in a non-traditional format, checking their level of knowledge and skills on specific topics[11].

Diagnostic: Using computer technologies, the teacher can quickly monitor and assess the students' mastery of the educational material.

Communicative: While working with educational programs and interacting with the computer, students overcome the barrier of shyness.

Virtual-interactive: This is a complement and, in a way, an evolution of previous stages. With the use of artificial intelligence, dialogues can be conducted both in text and in real-time, significantly improving students' skills. This is especially useful in situations where frequent travel or communication with native speakers is not possible.

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[8] Ng K., Wang S. Enhancing Student Learning with AI-Based Tools: A Case Study of Grammarly and Other AI Writing Assistants. *Educational Technology Research and Development.* 2022; 70(3):637–654.

[9] Baker R. S., Yacef K. The Role of AI in Automated Assessment and Feedback in Higher Education. *Computers in Human Behavior*. 2021; 114:106484.

[10] Kukulska-Hulme A., Shield L. The Role of Mobile and Computer Technologies in Language Learning: Emerging Trends and Issues. *Journal of Educational Technology & Society*. 2021; 24(4):123–136.

[11] Cohn C., Duffy S. Artificial Intelligence in Education: Benefits and Challenges of Virtual and Interactive Learning Platforms. *Computers in Education*. 2020; 134:72–82.

Using a computer in the process of learning English helps to accomplish the following tasks:

Interest in English for professional purposes: While working with the educational program, the method of "immersing" students in a linguistic environment for communication and thinking, close to real-life situations, is used. In addition, students develop an interest in working with a computer, particularly with various programs, and acquire skills in using additional resources and tools[12].

Visualization of educational material: With the help of educational programs, sensory, auditory, and visual components can be combined to influence students' perception of the text, as well as work in conditions of augmented or fully virtual reality.

Expansion of students' knowledge on a specific topic: Digital sources provide a plethora of interesting and useful illustrated information on topics that are either not presented in a compelling way in traditional textbooks or lack an interactive component. Students also have the opportunity to expand their knowledge, not only in the "English language" subject but also to gain insights and experience in situations close to real-life scenarios[13].

Checking and self-checking of acquired knowledge and skills: Working with educational programs, students have the opportunity to assess their performance by reviewing the "lesson results"[14].

As one of the program options, Grammarly can be considered an online platform based on artificial intelligence to assist with communication in English, launched in 2009. Grammarly improves the quality of written communication by providing recommendations for correctness, clarity, engagement, and tone of the message. The list of its functionality is quite significant and impressive. Its use can be a powerful tool in both work and learning (see Fig. 1).

As practice shows, in professional-oriented English classes, testing and control exercises are carried out using a computer. The purpose of using such educational computer programs is to teach students English for professional purposes by bringing them closer to real-life situations. In these integrated classes, students improve their knowledge, skills, and abilities acquired during previous periods of study. It is also highly effective to use

[12] Van der Meijden A., Visscher A. AI and the Personalized Learning Environment: Expanding Cognitive Processes through Technology. *Learning Technologies*. 2022; 34(3): 156–171.

[13] Soller A., Martinez-Maldonado R. Collaborative Learning and AI: Improving Communication and Interaction through Educational Technologies. *Computers & Education*. 2021; 165:104–120.

[14] Hennessy S., London D. Enhancing Student Learning in English for Professional Purposes through Educational Programs and Digital Tools. *Journal of Vocational Education & Training*. 2020; 72(4):549–567.

such programs as a means of intensifying and optimizing students' cognitive activities, activating their capabilities, and fostering their creative potential.

The implementation of innovative technologies, particularly the use of computer educational programs in classes, occurs in three stages:

Stage 1: Lexical and grammatical skills on the topic. During this stage, students learn the structure of English sentences and improve their language skills by listening to and repeating phrases and sentences from an electronic source related to their field. At the same time, they can see how effectively they are performing, as the result of their work is displayed on the screen in the form of a "grade." During this stage, the computer acts as a patient tutor, considering the individual characteristics of the student, who may need to repeat a phrase many times.

Stage 2: At this stage, language skills are improved, and the phrases and sentences practiced in the first stage are used in dialogues with the computer. The student must choose one of the three options provided by the computer as the correct answer and respond promptly to the phrase presented by the computer.

Stage 3: This stage focuses on assimilating the material and developing skills in using the lexical and grammatical knowledge acquired during the previous two stages. Students are offered grammatical and lexical tasks, such as arranging words in the correct order to form a sentence, etc. After completing these stages, the student can see how successfully they performed during the lesson by reviewing the lesson results.

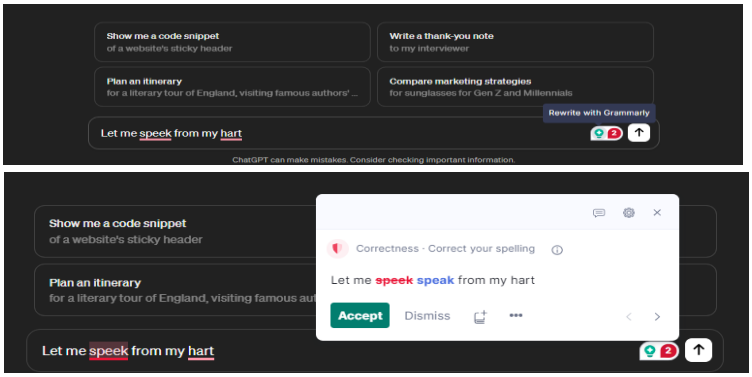

Fig. 1. Example of Grammarly usage.

CONCLUSIONS

The article discusses and analyzes the main characteristics and advantages of using the Grammarly concept in English language lessons for professional purposes for university students. This model shows that it differs from the lecture method and provides a modern approach to independent learning, reviewing common student mistakes, and obtaining necessary clarifications from the teacher. This cooperation ensures a creative and engaging learning environment. It should also be noted that the use of modern computer technologies can have a negative impact on students' learning. Here are a few possible aspects: the use of generative artificial intelligence or its tools for working with test tasks or generating texts (this completely eliminates the student's work on specific tasks or creates the illusion of "knowledge" in a student who receives a high grade for a generated answer to which they contributed no effort), focuses to tools (such as Google Translate). Excessive on such tools that relaxes students and may lead to the degradation of their skills, particularly the use of search engines to find ready-made answers to tasks or similar ones. It is impossible to control or prevent this, and in most cases, it remains the responsibility of the students themselves to decide how to use all available resources. In the future, we will focus on the relationship between the English language teacher and the student in the direction of concentrating on understanding their professional field ESP.

SUMMARY

The article explores the effectiveness of using the Grammarly digital writing assistant as a supportive tool in teaching English for Professional Purposes (EPP). The authors highlight how Grammarly's functions, such as grammar correction, vocabulary enhancement, tone detection, and plagiarism checking can improve students' writing accuracy and confidence. The study emphasizes that integrating Grammarly into classroom activities encourages autonomous learning, helps students identify typical errors, and supports the development of professional communication skills. The article concludes that Grammarly is a valuable supplementary resource that enhances the quality of students' written output and contributes to more efficient and interactive language learning.

References

1. Chung W. Artificial Intelligence in Higher Education: Challenges and Opportunities. *Computers & Education*. 2021; 169:104211.

2. Zhang J., Yang Y. Machine Learning for Educational Data Mining: Tools and Techniques. *Educational Technology Research and Development*. 2020; 68(4):2151–2172.

3. Li Z., Ma J. The Impact of Artificial Intelligence on Education and Learning: A Systematic Review. *Journal of Educational Technology & Society*. 2021; 24(2):129–142.

4. Guszcza J., Yoon H. AI-Powered Learning Systems: Trends and Future Applications. *IEEE Access*. 2022; 10:1534–1547.

5. Nasdaq futures slump as China's DeepSeek sparks US tech concern [Електронний ресурс]. *Bloomberg*. 27.01.2025. Режим доступу: http://www.bloomberg.com/news/articles/2025-01-27/nasdaq-futures-slump-as-china-s-deepseek-sparks-us-tech-concern (дата звернення: 17.11.2025).

6. Ally M., Tsinakos A. The Role of Artificial Intelligence in Education: Current Uses and Future Prospects. *Education and Information Technologies*. 2021; 26(4):4089–4107.

7. Liu Y., Lin J. Personalized Learning Using Artificial Intelligence in Higher Education: Opportunities and Challenges. *Journal of Educational Technology & Society*. 2020; 23(2):65–77.

8. Ng K., Wang S. Enhancing Student Learning with AI-Based Tools: A Case Study of Grammarly and Other AI Writing Assistants. *Educational Technology Research and Development*. 2022; 70(3):637–654.

9. Baker R. S., Yacef K. The Role of AI in Automated Assessment and Feedback in Higher Education. *Computers in Human Behavior*. 2021; 114:106484.

10. Kukulska-Hulme A., Shield L. The Role of Mobile and Computer Technologies in Language Learning: Emerging Trends and Issues. *Journal of Educational Technology & Society*. 2021; 24(4):123–136.

11. Cohn C., Duffy S. Artificial Intelligence in Education: Benefits and Challenges of Virtual and Interactive Learning Platforms. *Computers in Education*. 2020; 134:72–82.

12. Van der Meijden A., Visscher A. AI and the Personalized Learning Environment: Expanding Cognitive Processes through Technology. *Learning Technologies*. 2022; 34(3):156–171.

13. Soller A., Martinez-Maldonado R. Collaborative Learning and AI: Improving Communication and Interaction through Educational Technologies. *Computers & Education*. 2021; 165:104–120.

14. Hennessy S., London D. Enhancing Student Learning in English for Professional Purposes through Educational Programs and Digital Tools. *Journal of Vocational Education & Training*. 2020; 72(4):549–567.

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