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USE OF CHATGPT IN MARITIME ENGLISH LESSONS

Abstract. The article studies the implementation of innovative artificial intelligence tools, specifically the ChatGPT model, in the process of teaching Maritime English in higher education institutions. The relevance of the study is driven by the rapid technologization of the educational environment, which opens new perspectives for personalizing learning and enhancing the efficiency of training maritime professionals. The authors analyze ChatGPT's potential as a modern interactive learning tool that allows not only for the creation of individualized tasks but also for the simulation of complex professional communicative situations closely resembling real onboard working conditions.

A comprehensive model for integrating the chatbot into the educational process as a supplementary digital tool that harmoniously combines with traditional pedagogical methods is proposed in the article. A series of practical examples of successful ChatGPT implementation are described: simulating dialogues using Standard Marine Communication Phrases (SMCP), developing visual materials (posters), utilizing language training exercises, and interactive "chain storytelling" tasks. It is demonstrated that the use of artificial intelligence facilitates the development of students' core language competencies – speaking, reading, writing, and listening.

Particular attention is given to the psychological benefits of using AI: reducing language barriers, creating a comfortable environment for practice, and increasing cadets' motivation through gamification elements. Simultaneously, the authors critically evaluate the risks of implementing such technologies, including the possibility of incorrect responses, the lack of emotional intelligence in AI, and threats to academic integrity. The article concludes by emphasizing the necessity of mandatory pedagogical guidance, where the teacher acts as a facilitator guiding the student's interaction with the digital tool. ChatGPT is considered an effective supplementary resource that optimizes content creation and provides immediate feedback for language learners.

Keywords: artificial intelligence, ChatGPT, Maritime English, language competence, dialogue simulation, SMCP, interactive learning, higher education, digital tools, personalized learning.

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ВИКОРИСТАННЯ CHATGPT НА ЗАНЯТТЯХ З МОРСЬКОЇ АНГЛІЙСЬКОЇ МОВИ

Анотація. У статті детально досліджується впровадження інноваційних інструментів штучного інтелекту, зокрема моделі ChatGPT, у процес викладання морської англійської мови в закладах вищої освіти. Актуальність дослідження зумовлена стрімкою цифровізацією освітнього середовища, що відкриває нові перспективи для персоналізації навчання та підвищення ефективності підготовки фахівців морської галузі. Автори аналізують потенціал ChatGPT як сучасного засобу інтерактивного навчання, що дозволяє не лише створювати індивідуальні завдання, а й моделювати складні професійні комунікативні ситуації, максимально наближені до реальних умов роботи на судні.

У роботі запропоновано комплексну модель інтеграції чат-бота в навчальний процес як допоміжного цифрового інструменту, що гармонійно поєднується з традиційними педагогічними методами. Описано низку практичних прикладів успішного впровадження ChatGPT: симуляція діалогів із використанням стандартних фраз морського радіозв'язку (SMCP), розробка візуальних матеріалів (постерів), використання мовних тренажерів та інтерактивних вправ типу «чейн сторі». Доведено, що застосування штучного інтелекту сприяє розвитку ключових мовних компетенцій студентів – говоріння, читання, письма та аудіювання.

Особлива увага приділяється психологічним перевагам використання ШІ: зниженню мовного бар'єру, створенню комфортного середовища для тренувань та підвищенню мотивації курсантів за рахунок елементів гейміфікації. Водночас автори критично оцінюють ризики впровадження таких технологій, зокрема можливість отримання хибних відповідей, відсутність емоційного інтелекту в ШІ та загрози академічній доброчесності. У підсумку наголошується на необхідності обов'язкового педагогічного супроводу, де викладач виступає фасилітатором, що коригує взаємодію студента з цифровим інструментом.

Ключові слова: штучний інтелект, ChatGPT, морська англійська мова, мовна компетентність, симуляція діалогу, SMCP, інтерактивне навчання, вища освіта, цифрові інструменти, персоналізація навчання.

Problem statement. The process of technologization of the educational environment in higher education institutions opens new perspectives for the professional activities of academic and pedagogical staff. Artificial intelligence emerges as one of the most significant scientific and technological breakthroughs of the present time, sparking active discussions in various fields, including education, about its potential capabilities, directions for improvement, and practical applications.

The integration of innovative educational technologies, particularly the implementation of artificial intelligence systems in the teaching process of Maritime English, marks a new stage in the development of pedagogical science. The use of artificial intelligence tools capable of analyzing the individual characteristics of educational activities allows for the creation of personalized learning tasks and didactic materials tailored to the level of preparation and learning style of each higher education student.

Among the most promising developments based on neural network technologies, it is worth highlighting ChatGPT (Generative Pre-trained Transformer), developed by the research laboratory OpenAI. This large-scale language model operates in a conversational mode, maintaining the context of previous interactions, which ensures a coherent, logically connected communication – unlike traditional chatbots, which lack such a capability.

Given the relatively recent spread of ChatGPT among Ukrainian users, the issue of its impact on the effectiveness of the learning process, as well as the specifics of integrating this tool into the practice of learning Maritime English by higher education students in Ukraine, remains insufficiently explored.

Recent research and publications. The issue of applying artificial intelligence (AI) in the educational process is a subject of close attention from scholars working in the fields of pedagogy, linguistics, and related disciplines.

For instance, O. Zubenko says that the integration of AI technologies into foreign language teaching enhances the effectiveness of educational activities by intensifying the learning process, boosting students' motivation for cognitive activities, engaging even passive learners. Furthermore, the researcher emphasizes that the use of AI fosters greater visual appeal and stimulates abstract and logical thinking. At the same time, the issue of safety and potential risks associated with the use of this technology remains relevant. According to the scholar, only by considering all possible threats can the implementation of AI in the educational environment ensure true effectiveness in the process of learning foreign languages [5].

T. Kosova focuses on the feasibility of integrating AI, particularly the GPT chatbot, into the process of teaching English through interactive methods. She also underscores the importance of personalizing approaches to teaching based on the

individual needs of each learner. However, the researcher notes that the introduction of such technologies comes with several drawbacks that require critical consideration [7].

N. Akopyants, based on the results of empirical research, which includes an analysis of the advantages, disadvantages, and opportunities of using AI in English language learning, concluded that the use of such technologies contributes to enhancing the effectiveness of the educational process and improving overall academic performance [1].

I. Kachur, in her scholarly studies, defines artificial intelligence as a revolutionary tool capable of transforming the modern educational landscape. According to researcher, the application of AI makes education more accessible, high-quality, and motivating, while also helping optimize the professional activities of educators. However, I. Kachur emphasizes that AI cannot fully replace live interpersonal communication, which remains essential in the process of learning a foreign language.

M. Mariyenko and V. Kovalenko, in their research, examine the potential of AI as an effective auxiliary resource for teacher, which can be directly applied during the learning process [8].

L. Viktorova et al. analyzed the practical applications of artificial intelligence technologies in foreign language learning. In particular, they identified key scenarios for using chatbots, with functions such as information retrieval and content generation standing out [4].

I. Romanyshyn et al. analyzed the transformations in teaching methods for English language instruction in higher education through the use of artificial intelligence. The researchers concluded that innovative teaching methods would make the educational process more individualized and flexible, enabling it to adapt to the needs of each student or teacher [9].

The above allows us to state the relevance and importance of the chosen research topic, as artificial intelligence is widely used in all areas of human life today, including the pedagogical process. However, the advantages and opportunities of using ChatGPT, as one of the AI products, in the process of learning Maritime English, have not yet been the subject of a separate, comprehensive scientific study.

The purpose of this article is to examine ChatGPT as an innovative tool for learning Maritime English, to identify and explore the advantages and possibilities of this technology, to outline its limitations, and to provide recommendations for its use in language learning.

Main text. The chatbot is an interesting tool that can be integrated into foreign language classes for higher education students. This program, based on machine learning technology, can simulate a real conversation with users and be used as an assistant for lessons for various audiences. One of the popular AI systems is ChatGPT, developed by the OpenAI laboratory.

This technology represents an advancement over the automated speech recognition, natural language processing, and basic AI found in digital assistants like Siri and Alexa, which are primarily used to carry out simple automated functions.

While assistants such as Siri and Alexa rely on machine learning to deliver information and perform tasks on command, like playing music or providing weather updates, ChatGPT is specifically built to conduct interactive, two-way conversations with users.

ChatGPT is a basic model used for context-based text generation. It uses the Transformer architecture, which allows the model to understand the context and generate responses that match the user's input. ChatGPT is a tool that can quickly respond to any request. By assessing student work and delivering detailed feedback, it has the potential to save hours of instructional time. Artificial intelligence tools have the potential to provide immediate feedback, which improves language learning outcomes. Chatbots engage students in language interaction, providing the opportunity to receive instant feedback. Teachers can prepare for classes faster because ChatGPT can create presentations, develop tests, discussion questions, and create vocabulary for the relevant topic.

ChatGPT distinguishes itself from other categories of AI-powered software through its dialog-based format. Earlier chatbots generated responses to natural language queries by selecting from a set of predefined answers. These responses were written in advance and triggered by keywords or the content of a user's question. In contrast, ChatGPT generates its own unique responses based on user prompts.

Interaction with Chat GPT starts with someone typing a prompt in their natural language, not the language of the device they're using. This means you can give the machine a command or ask it a question without using computer code. Chat GPT responds in the same language you're using. It continues to build a conversation as you interact with it. This chain of interactions feels like a real-time dialog box and creates a semblance of a conversation or a highly intelligent response to your request.

Chat GPT creates rather than throws out content, which means it can sometimes make false assumptions. Chat GPT or any other generative model of artificial intelligence is not an unmistakable source of truth, a reliable narrator, or authority on any topic.

The interaction between users and ChatGPT differs significantly from previous experiences with conventional software. Traditional natural language processing systems were typically limited to brief exchanges and fixed responses. ChatGPT, by contrast, is capable of generating original content and sustaining much longer conversations.

It is important to note that ChatGPT does not think like a human. It makes predictions based on learned patterns and responds through reasoned assumptions and predictions of likely or contextually appropriate word sequences. Nonetheless, legitimate concerns remain regarding the potential risks and responsibilities associated with such technologies.

The application of AI, particularly Chat GPT – a sophisticated natural language processing model – within the educational domain presents several significant implications:

1. Enhancement of learner motivation: Chat GPT has the potential to positively influence students' motivation to learn by fostering increased engagement, self-

efficacy, and a more favorable attitude toward the learning process. Its capacity to deliver interactive and individualized support contributes to a more stimulating and learner-centered environment.

2. Development of reading and writing proficiency: The integration of Chat GPT in educational settings has been shown to facilitate the improvement of students' literacy skills. Through the provision of immediate feedback and constructive suggestions, the tool supports learners in refining their writing and enhancing their reading comprehension.

3. Assistance in English Language Acquisition: In the context of second language learning, access to responsive and on-demand assistance is a critical factor. Chat GPT offers practical support by enabling instant translation, language practice, and conversational engagement, thereby serving as a supplementary resource for English language learners.

4. Advancement of teaching methodologies: The use of Chat GPT can also contribute to the enhancement of pedagogical practices. Educators may employ the tool to provide differentiated instruction, clarify complex concepts, and promote interactive learning experiences. Such practices align with contemporary educational paradigms that emphasize learner autonomy and active participation.

On the CASES educational platform, specialists from the Grade Education Centre provide evidence-based recommendations for utilizing ChatGPT in English language learning. According to their guidance, this AI-driven tool can effectively support vocabulary expansion through the acquisition of new phrases, idioms, synonyms, antonyms, and context-specific expressions commonly used in dialogues. Furthermore, ChatGPT facilitates the development of writing proficiency across various text types, offers error correction, and enables the creation of customized tests aimed at reinforcing grammatical knowledge. Additionally, it can contribute to the improvement of pronunciation, thereby serving as a comprehensive supplementary resource for language learners [2, p. 11].

ChatGPT demonstrates applicability across diverse student populations, including university learners. It can support the development of reading and writing competencies by providing feedback on vocabulary usage, grammar, and syntactic structures, as well as by assisting in the cultivation of a coherent writing style and critical thinking skills. Additionally, ChatGPT may be employed to generate questions and prompts that encourage students to engage in deeper analysis of texts, reflect on their writing processes, and interpret information critically. The tool also facilitates comprehension by summarizing and clarifying complex textual content. As an educational resource, ChatGPT can foster creativity, enable personalized learning experiences, and better prepare students for future engagement with AI technologies in academic and professional contexts.

ChatGPT contributes to the development of educational materials by streamlining the content creation process, thereby reducing the time and effort required to produce textbooks and other instructional resources. It also supports the design of assignments

by enabling educators to develop interactive, language-oriented tasks that foster student engagement and linguistic skill development.

A number of advantages can be identified in the use of the ChatGPT chatbot by students during English language learning.

Creation of an interactive learning experience: students can engage in conversations with the model, ask questions, express their thoughts, and receive immediate feedback. This interaction promotes speaking practice and helps develop communication skills in real-life contexts.

On-demand learning support: ChatGPT can serve as an invaluable tool for just-in-time learning. Students can pose questions related to grammar, vocabulary, or pronunciation and receive explanations along with relevant examples. This enables learners to study at their own pace and access the information precisely when they need it.

Vocabulary expansion and pronunciation improvement: ChatGPT can significantly assist in enhancing vocabulary and pronunciation. It provides examples of how new words and phrases are used in context and offers guidance on correct pronunciation.

Personalized learning experience: ChatGPT can adapt its responses to meet the individual needs of each student. It can adjust to the learner's proficiency level and offer exercises appropriate to that level. Furthermore, the chatbot can monitor the student's progress and suggest additional materials or exercises to address areas of difficulty.

Practice in real-life communication: one of the most challenging aspects of language learning is mastering real-life communication. ChatGPT can provide students with realistic conversational scenarios that help them grasp the nuances of spoken language, politeness strategies, and the appropriate use of expressions [10, p. 74-75].

However, the widespread accessibility of ChatGPT has raised concerns within academic institutions, particularly regarding its use by students for completing homework and examinations. In response, some schools and universities have restricted or blocked access to the tool on institutional networks, citing potential academic integrity issues. Reports have surfaced of students using ChatGPT to generate entire assignments or exam responses, in some cases submitting the AI-generated content without any modifications. This practice has heightened concerns among educators about the ethical implications and the authenticity of student work.

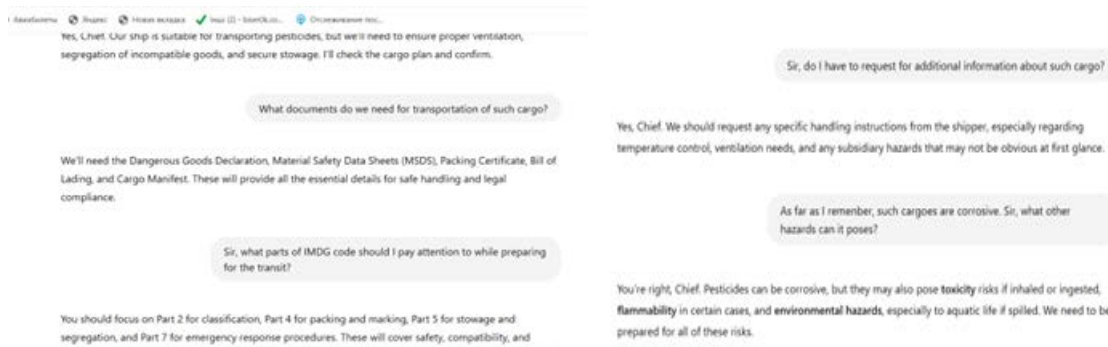
Furthermore, traditional plagiarism detection software often fails to identify content generated by ChatGPT, as such texts are not reproduced from existing sources but are instead algorithmically generated, thus avoiding direct plagiarism. The inability of standard detection tools to recognize AI-generated material presents a significant challenge to academic integrity frameworks, prompting the need for revised assessment strategies and updated academic policies.

This article examines the potential applications of the ChatGPT model in the context of Maritime English instruction and investigates how this technology can enhance the learning process. ChatGPT offers potential for improving Maritime English studying by assisting students in refining their speaking skills, listening

comprehension, reading proficiency, vocabulary acquisition, and the accuracy of grammatical usage.

An illustrative application of GPT in the context of Maritime English learning is the English Conversation AI chatbot, or Talk to me. This tool facilitates English language learning through interactive communication with GPT. It enables users to pose questions, perform various tasks, and receive responses that are grammatically and orthographically accurate. The following examples demonstrate how this chatbot can be integrated into Maritime English lessons.

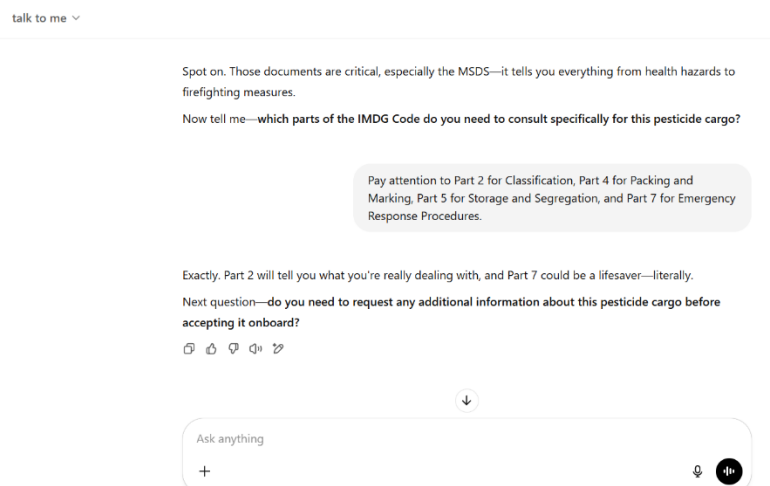
The parameters for interaction were established around the topic “Transportation of Dangerous Goods” in the following format: *«Act as a real Master. I am your Chief Officer and I will ask you some questions about preparing for the transportation of pesticides»* (Pic. 1).



Pic. 1 – Example of Task 1 using ChatGPT

This task can be presented in an alternative format: the student will assume the role of the Captain, while the AI will act as the Chief Officer. The AI is provided with a list of information for the questions. It is essential to instruct the AI to respond to the next question only after the previous one has been answered. In this case, the parameters for communication will be slightly modified: *«Act as a real Chief Officer. Ask me some questions about preparing for the transportation of pesticides. Ask the next question only after my answer. Use the following information for your questions:*

- *whether your ship is suitable for such cargo,*
- *what documents you are expecting to receive,*
- *what parts of IMDG Code you need to consult with,*
- *whether you need to request additional information about such cargo,*
- *what are the main and subsidiary hazards of the cargo,*
- *what are the potential risks for the crew to be notified,*
- *whether you need additional safety measures»* (Pic. 2).



Pic. 2 – Example of Task 2 using ChatGPT

Another example of a task is to complete the dialogue using the SMCP for the topic “Emergency Response Actions in Case of Fire”. The teacher should provide AI with the phrases that should be used in the dialogue and give the following instructions for communication: “Act as a real Port Service. Use the following SMCP ... Continue the dialogue

- Port Service. This is MV Korea. How do you hear me? Over.
- MV Korea. This is Port Service. Go ahead. Over.
- Port Service. I'm on fire in the hold in position three two degrees one five minutes north one two eight degrees two four minutes east. Over.
- Korea. Is fire under control?
- Port Service. Fire is not under control... ... Answer only after my response” (Pic. 3).

- MV Korea. Understood. Take actions according to the Emergency Plan. Operate the general emergency alarm. Alarm the harbour fire brigade. Put on protective clothing and breathing apparatus. Over.

Port Service. Two crewmembers are injured. Over

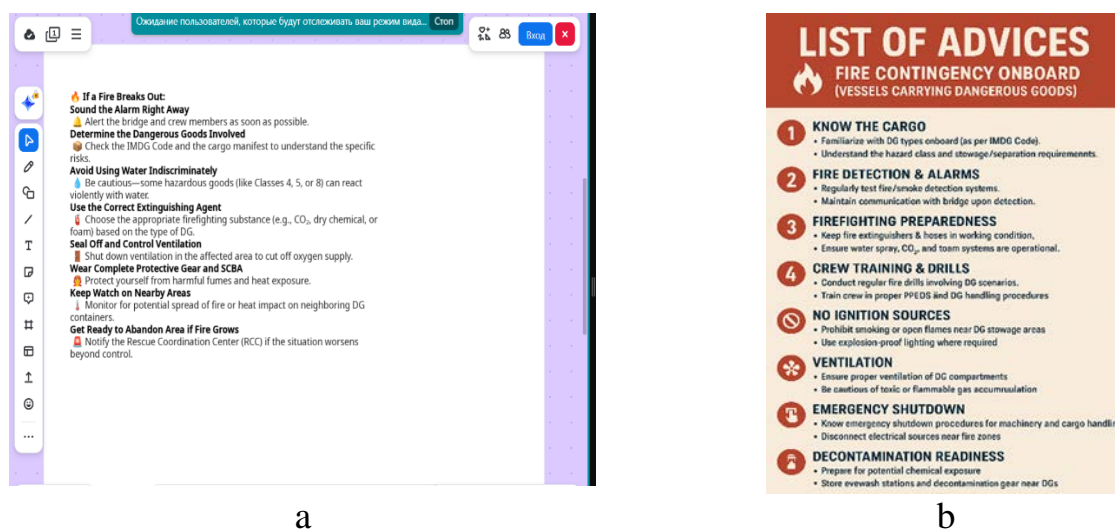
MV Korea. Understood. Provide first aid immediately. Evacuate injured crewmembers to a safe area. Medical assistance is on the way. Over.

Port Service. Temperature in container with IMO class 4 goods is increasing.

MV Korea. Understood. Only open the container when smoking is stopped. Cool down the container with water. Fight the fire from a great distance. Over.

Pic. 3 – Example of Task 3 using ChatGPT

Teacher can give the task to make a poster with “List of advices” which can be applied to fire contingency on board carrying dangerous cargoes. Students can make their posters (a) and then compare them with the one created by AI (b) (Pic. 4).



Pic. 4 – Example of Task 4 using ChatGPT

One more task that students can do with the help of AI is chain story. The parameters for interaction were established around the topic of “Vessel Traffic Service” in the following format: “*Act as a real student. Our task is to make a story about sailing in VTS area using the words: sailing, voyage, high traffic density, pilot station, information messages, VTS, defects, seamark, unlit, off station. Use one word in one sentence. We are making sentences one by one. You are the 1st to start*” (Pic. 5)

Alright, here we go:

Our sailing began just before dawn, with calm seas and a clear horizon.

Your turn!

In some time, we entered the port with high traffic density.

We received regular information messages from VTS to help us navigate safely.



Pic. 5 – Example of Task 5 using ChatGPT

ChatGPT, when used as a communicative simulator, produced responses that were comprehensive and demonstrated a high degree of lexical richness and grammatical accuracy. Beyond its capacity to create an effective artificial English-speaking environment, this form of communicative simulation also offers psychological comfort to learners. Recognizing that they are interacting with a language simulator, students feel less pressure and are more inclined to rehearse or repeat questions before speaking. Since the chatbot responds to coherent speech and

interprets pauses as cues to begin its reply, learners are encouraged to speak fluently, with appropriate rhythm and accurate pronunciation to ensure successful interaction with the AI. Additionally, the gamified aspects of learning with ChatGPT, along with the ability to personalize conversations and select topics of interest, further motivate students to actively engage in developing their speaking skills.

While ChatGPT can serve as a valuable tool for enhancing proficiency in Maritime English, it should be integrated as part of a broader, multimodal learning strategy that includes watching videos, listening to audio materials, engaging in conversations with native speakers, and reading both general and technical texts. Although artificial intelligence offers meaningful support in learning and practicing Maritime English, it cannot fully substitute for human involvement. Language acquisition requires contextual awareness, sensitivity to cultural and linguistic nuances, personalized instruction, and consistent, active practice.

In this context, the teacher's role evolves into that of facilitator, guiding and supervising the student's interaction with ChatGPT. The system's inherent limitations are the potential for inaccurate responses, reliance on the quality of user input, absence of interpersonal dynamics, and ethical considerations. To maximize the benefits of ChatGPT, it is advisable to define clear learning objectives and combine its use with traditional pedagogical approaches, supported by an experienced teacher who can ensure that the learning process remains accurate, effective, and contextually grounded.

ChatGPT has the ability to generate natural language and generate coherent responses based on context. It can not only answer simple questions, but also perform complex verbal reasoning and expression. It is an end-to-end model that can receive input text of any length and output responses accordingly. It has the ability to adapt to different fields and topics, and can respond to various types of questions. It is able to capture grammatical, logical, and semantic information in the language to produce coherent and reasonable responses. ChatGPT can learn how to express language in different styles and tones by training diversity in the data. This allows it to generate personalized responses based on the user's needs and preferences.

Conclusions. As a result of our research, the use of ChatGPT in Maritime English teaching offers several notable benefits, including enhanced access to authentic language materials, more efficient development of oral communication skills, improved writing proficiency, enriched vocabulary and grammatical accuracy, and individualized learning. As such, ChatGPT represents an effective and innovative tool for students who study Maritime English. Further prospects for scientific research and development in this direction are seen in expanding the range of use of this technology in the academic environment.

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Література:

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