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THE IMPACT OF ARTIFICIAL INTELLIGENCE ON LANGUAGE LEARNING

In recent years, due to the rapid development of computer science, artificial intelligence has entered a new stage of development. There is a constant impact on changing the methods and concepts of foreign language learning and teaching. Like artificial intelligence, foreign language learning is also closely related to the use of neuroscience, hence artificial intelligence finds its own application in the field of language learning relatively easily. With the rapid development of information technology, the rational use of artificial intelligence in teaching has become an integral trend of modern education. Building a foreign language teaching with current trends can provide learners with learning strategies suitable for them and promote greater achievement of learning goals. The article analyses the teaching methods and assessment methods and the changed role of foreign language teachers.

Key words: *artificial intelligence, foreign language teaching, smart technologies, tools for assessing teaching methods, the role of teachers.*

Problem statement. The relevance of this study is in the application of technologies, namely GPT chat, in order to determine the effectiveness of the system in the framework of automatic evaluation of written work. Modern technological tools are widely used in various fields, including education. Consequently, it is necessary to analyse the possibility of introducing machine intelligence into the educational process, identifying the advantages and disadvantages of the technology, as well as evaluating the system for its feasibility in training and solving routine tasks. In this research, we will try to understanding the role and impact of AI in foreign language teaching at higher education institutions.

Analysis of previous research and publications. Currently, there is an increasing interest in the application of artificial intelligence in educational processes. However, research on English language teaching using intelligent technologies is not a common topic of scientific publications. Nevertheless, the majority of works on the researched topic have been analyzed, the main directions of which are the review of various applications based on machine intelligence within the framework of foreign language teaching. The studies of domestic scientists such as V. Taran, O. Ivakhnenko, etc., as well as the works of foreign specialists were considered. Recent advancements in artificial intelligence have led to the development of various tools and platforms aimed at enhancing language learning. These include chatbots, language learning apps, automated text analysis systems, and virtual tutors. Several studies have been conducted to evaluate the effectiveness of these tools in educational settings:

1. **Language Learning Apps**: Applications like Duolingo and Babbel leverage AI to provide personalized learning experiences. Studies have shown that these apps can significantly improve language proficiency, especially in vocabulary and grammar, due to their adaptive learning algorithms that adjust to the learner's pace and performance.
2. **Automated Text Analysis Systems**: Tools such as Grammarly and Write & Improve use AI to provide instant feedback on written texts. Research indicates that these tools can help students improve their writing skills by highlighting grammatical errors, suggesting corrections, and providing explanations.
3. **Chatbots and Virtual Tutors**: AI-powered chatbots like Replika and virtual tutors integrated into platforms such as Pearson's AI tutor offer interactive conversational practice. Studies have found that these tools can enhance speaking skills and increase student engagement through real-time, interactive feedback.
4. **Effectiveness and Reliability**: The effectiveness of AI tools varies depending on the specific application and context. Some studies have reported positive outcomes, while others highlight limitations in AI's ability to understand context and provide nuanced feedback.

5. **Adaptability and Personalization**: Although AI systems are designed to adapt to individual learning needs, their ability to provide truly personalized learning experiences is still limited. Research indicates that while AI can offer personalized recommendations based on performance data, it may not fully account for individual learning styles and preferences.
6. **Integration into Curriculum**: Integrating AI tools into existing curricula poses significant challenges. Educators need to be trained to effectively use these tools, and there must be a balance between AI-assisted learning and traditional teaching methods. Studies have shown that successful integration requires a comprehensive approach, including curriculum redesign and ongoing support for educators.
7. **Student Engagement and Motivation**: While AI tools can increase engagement through interactive and gamified learning experiences, there is a risk of over-reliance on technology. Research suggests that combining AI tools with human interaction and support is crucial for maintaining motivation and ensuring a holistic learning experience.
8. **Accessibility and Equity**: Ensuring that AI tools are accessible to all students, regardless of their socioeconomic background, is a major concern. Studies have highlighted the digital divide and the need for inclusive design to ensure that AI benefits all students equally.
9. **Ethical and Privacy Concerns**: The use of AI in education raises ethical issues, particularly regarding data privacy and the potential for algorithmic bias. Research emphasizes the importance of transparency, accountability, and the ethical use of data to protect student privacy and prevent discrimination (Rasul, 2023).

Addressing these issues is crucial for understanding the role and impact of AI in foreign language teaching at higher education institutions.

Foreign studies evaluate the use of GPT chatbot in the context of writing and editing written works, focusing on saving time and effort spent by teachers and students, revealing the ability of chatbots to generate ideas and improve the quality of texts (Baker, Smith, Anissa, 2019). Domestic authors investigate the impact of GPT chatbots on students' cognitive activity and the possibility of integrating smart technologies into the educational process, and identify their advantages and disadvantages. Nevertheless, there are opinions regarding the limitations of the system and the failure of GPT chat as a co-author of scientific papers. In addition, some experts focus on analyzing the impact and outcome of student learning (Godwin-Jones, 2020). That said, further exploration of the potential of GPT chat remains relevant as the system continues to evolve and provide alternative outcomes during interaction.

Research objective. The scientific novelty stems from the rapid development of digital systems and the possibility of potential implementation of chat agents in foreign language teaching in technical universities in order to improve the educational process. The study examines the practical application of GPT chat in the context of checking students' written work, revealing the failure of the system's autonomy, and defines GPT chat as an auxiliary tool. The aim of the study is to analyze the validity of automatic assessment of students' written work in a foreign teaching language through GPT chat in a technical university. The objectives of the study are: practical interaction with a chatbot to identify the feasibility of using the GPT chatbot to check students' written assignments; analysing the potential of the system; identifying the effectiveness and limitations of the digital assistant within the framework of automatic checking of written work. The theoretical significance of the study lies in expanding the horizons of using digital technology in the context of supporting English teachers in technical universities. The practical significance is to determine the possibility of using the GPT chatbot in educational practice in order to solve the routine tasks of the teacher and reduce the time spent on checking written work.

Presentation of the main research material. The latest technologies and digitalization are developing rapidly and are being applied everywhere. One of the most breakthrough means of modern technologies is artificial intelligence. Professor Lu Bai from Tsinghua University said at the 'Artificial Intelligence Summit on Artificial Intelligence and the Future of Education' held in 2017: 'Anything that reflects repetition and requires the accumulation of large amounts of data, can be replaced by artificial intelligence.' (Huang, Chiu, 2017). In education, artificial intelligence is capable of performing the tasks of recording the attendance of students, checking and correcting homework assignments, correcting test papers, calculating grades. In addition, language learning software supported by an Artificial Intelligence can test students' mastery of a foreign language from a variety of different aspects foreign language; speech recognition technology can help correct pronunciation in real time, and a foreign language listening and speaking testing system with intelligent voice technology can conduct automated oral tests with an objective assessment, etc. Innovative technologies will undoubtedly help teachers to to free themselves from a number of tasks. At the same time, it will force educators to think about changing their role in the educational process in order to adapt effectively to the new educational environment.

At present, one can find a large number of variants of the definition of the term 'artificial intelligence'. Nevertheless, they all boil down to the application of machine programs imitating the work of the human brain. A distinctive feature of artificial intelligence is its ability to learn and self-improvement in the process of performing tasks, which allows it to adapt to changing needs, unlike traditional systems, the functioning of which is limited to

the performance of tasks according to a pre-programmed scheme. The evolution of digital technologies undoubtedly has an impact on the educational process, as the traditional learning system does not always meet the expectations and needs of the individual of the XXI century. [10]. Consequently, the educational environment should be adapted to the requirements of the modern world, where smart technologies transform outdated methods, making the learning process more involved and effective (Cotton ,2023). In education, we can divide the application of artificial intelligence tools into three aspects: aimed at helping the learner, helping teachers, and implementing artificial intelligence systems in the educational process as a whole. At the moment, the most demanded artificial intelligence tools in foreign language teaching are systems capable of recognizing and analyzing text, such as voice assistants, chatbots, online translators, and services designed to check spelling, punctuation, grammar and text stylistics. In this study, we will focus on analyzing the application of smart technology as a teacher support tool, namely, we will investigate the feasibility of applying the GPT 3.5 chatbot, which functions based on artificial intelligence, in the process of evaluating students' written English papers in a technical university. Recently, Open AI presented its latest achievements: chatbots GPT 3.5 and GPT 4, which significantly simplified the integration of artificial intelligence technologies and demonstrated positive results in terms of improving the efficiency of the educational process. The updated versions are characterized by notable progress in the area of text generation tools and applications. Compared to existing chatbots, the systems are characterized by higher performance in text generation, especially in generating long essays and creative works, and have an amazing ability to perform human-like actions in various academic and professional tasks. This truly represents a revolution in the field of text generation. Academic discussions indicate the potentially important role of GPT chat in a variety of writing tasks of a universal nature (Geher, 2023).

Methodology. Foreign researchers consider the use of GPT chat from the point of view of an effective tool for writing full-cycle papers: from idea to final editing. The main advantage is saving time and effort, which allows students and teachers to focus on other tasks; ability to generate new ideas for writing assignments; higher quality of translation, eliminating possible errors in language constructions. Machine intelligence can proofread and edit students' written work, offering to correct grammatical, syntactic and spelling errors. Some scholars recognize that the GPT chatbot can be a writing assistant and have added it as a co-author to their research papers (Stokel-Walker, 2022). However, opinions are divided and other researchers do not favor the idea of using chat as an assistant in scientific writing. Barrott points out the limitations of the system such as the lack of access to up-to-date data and the provision of inaccurate information by the chatbot (Barrot, 2023). Domestic authors analyze the functional possibilities of GPT chat application from the point of view of students 'cognitive activity, pointing out the ability of chat to stimulate students' criticality, creativity and motivation; integration strategies and positive aspects of smart technology within foreign language education; the use of artificial intelligence as a tool to optimize scientific activity. Research into the use of smart applications by teachers is not as widespread as works that focus on technology to support students. Nevertheless, most teachers use software or applications to supplement their teaching practice. The significance of machine intelligence in teaching includes ubiquitous teaching, personalization and easy access to course materials, effective and enhanced responses through audio-visual aids, and automatic assessment of written work (Grimes, 2019).

Results. For a teacher, the use of modern technology is appropriate for routine tasks such as planning and grading. Artificial intelligence-based chatbots are a promising advancement that can increase the pace of work and efficiency of daily routine. One of the significant advantages of using machine intelligence in teaching is the ability to automatically assess written work, including essays. Grading written work can be an extremely time-consuming task, especially when working with a large group of students. Automating the process significantly reduces the time spent on revision and allows teachers to focus on more important aspects of teaching, such as programme design or differentiated instruction. Automated assessment relies on the use of algorithms and neural networks trained on large amounts of textual data. Such systems have the ability to analyse various structural and content aspects of written work, such as text organisation and cohesion, vocabulary usage, style elements and logical sequence of thought. Also, artificial intelligence for automatic essay grading increases the objectivity and consistency of assessment, as artificial intelligence algorithms are guided by predetermined criteria, which helps to reduce the influence of subjective human factor (Kalandra, 2023). This research work is focused on analysing the effectiveness and feasibility of using a GPT chatbot as a means of checking written work in the context of English language teaching in a non-linguistic university. Technical students systematically interact with various diagrams and charts, and as such, the description of graphical data is an integral part of the English language teaching programme. To obtain the results of the study, an empirical method was used, which included analysing 10 written papers. The experiment included the following steps: student papers were duplicated into the GPT chat system, then certain commands were given to the artificial intelligence such as: 'check the text for errors', can you show mistakes, can you find mistakes. In response to each of these commands, the chatbot provided a response that was further analysed. Let's consider the variants of answers provided by the GPT chatbot. The first command in Ukrainian: 'check the text for errors' demonstrated its inefficiency, as the chatbot simply returned text that was similar to the original but contained corrections, without pointing them out. Thus, error detection required

comparing the original text with the text provided by the chatbot. This process was quite long and required careful attention. The next two commands were processed by the chatbot more successfully. After the second command: can you show mistakes - the machine mind produced the corrected text and supplemented it with comments.

Certainly, here are the mistakes in the text:

–"amount of people" should be corrected to "number of people";

– "The glance on the graph" is awkward phrasing.

It can be improved to "A glance at the graph.";

– "figures for television increased" can be clarified to "television viewership figures increased";

–"peaked up at approximately 50%" should be revised to "peaked at around 50%"

– "radio one's" should be corrected to "radio's";

The response of the chat room to the last command: *can you find mistakes* - was that the chat room highlighted the mistakes in bold but did not provide explanations.

Turning to details, it can be seen that the percentage of residents who went to a cafe in the last 4 weeks is almost the same for Sydney.

The last response prompted a query: *what's wrong with highlighted phrases.* However, the answer to this command was meaningless in terms of being wrong: *'Went to a cafe' is not a mistake, but to improve clarity, it could be revised to 'visited a cafe'.*

Based on the above, the following conclusions can be drawn:

1. To successfully correct and search for errors in text, it is necessary to provide the chatbot with a precisely formulated command, and this may require several attempts.

2. The chatbot is capable of correcting grammatical and stylistic errors, as well as paying attention to punctuation, which is a significant advantage, as the instructor can sometimes miss such flaws due to human error. However, the errors corrected by the chatbot are not always absolutely correct, sometimes inaccuracies are made.

3. Artificial intelligence checks papers much faster than a teacher: you can get an answer within a minute, while manual assessment can take 5 minutes or more, especially if a detailed analysis is performed.

4. The GPT chatbot is capable of correcting errors in the text, but it is not capable of analysing and correcting errors related to misunderstanding of texts because it does not have visual perception capability.

5. An electronic format is required to upload written work to the chat room. However, controlling written work involves completing the schedule description in written form, which complicates the process and requires additional efforts such as retyping or using converters to convert handwritten text into electronic format. This is an extremely time-consuming activity, especially for teachers without technical skills.

Conclusions. Artificial Intelligence represents not only a revolutionary change in the field of technology. These technologies have also caused significant social and economic changes, as well as changes in education, culture, and people's worldviews. In this process, it is necessary to find a new role for live teachers of a foreign language. In order to solve this problem, teachers need to keep up with the times, constantly learn and improve themselves, strengthen their professional and level of mastery of information technologies, to break the established image of a teacher both in the in the eyes of others and in their own minds. Only those teachers who respect learners, who observe them and guide them in the right direction will be able to respond promptly to the challenges of tomorrow. Artificial Intelligence offers many opportunities to improve language learning by making it more personalised, interactive and effective. However, in order to maximise the benefits of AI, emerging challenges need to be considered and addressed. Only with a balanced approach to AI implementation can high quality learning and accessibility of educational resources for all learners be ensured. Overall, Artificial Intelligence can be a useful assistive tool for checking written work in the context of correctly specified command, correct usage and knowledge of technical programs. GPT chat is a useful assistant in the context of correcting grammatical, punctuation and stylistic errors. This is especially relevant for an inexperienced teacher or in situations where the teacher doubts the correctness of a phrase or expression. It is important to note, automatic assessment does not replace the role of the teacher completely, as the chat is not able to correct semantic errors according to the graphical material, also the system can incorrectly respond to the request, which was confirmed by the study.

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ВПЛИВ ШТУЧНОГО ІНТЕЛЕКТУ НА ВИВЧЕННЯ ІНОЗЕМНОЇ МОВИ

В останні роки, завдяки стрімкому розвитку та масовому застосуванню комп'ютерних технологій, штучний інтелект, галузь інформатики, вступив у новий епохальний етап розвитку. Прискорення настання ери штучного інтелекту справило революційний вплив на спосіб життя сучасної людини, а також на трудову та інші види діяльності. Частка штучного інтелекту у сфері викладання іноземних мов неухильно зростає. Він постійно впливає на зміну методів, змісту та концепцій вивчення та викладання іноземних мов. Як і штучний інтелект, вивчення іноземних мов також тісно пов'язане з використанням нейронаук, тому штучний інтелект відносно легко знаходить своє застосування у сфері вивчення мов. Конкретними прикладами є такі технології, як машинний переклад, діалогова взаємодія між людиною та машиною, робототехніка в навчальному процесі тощо. Поява цих технологій змінила традиційну концепцію навчання. Методи, що використовуються, також впливають на роль викладачів і способи оцінювання навчання. Зі стрімким розвитком інформаційних технологій раціональне використання штучного інтелекту в навчанні стало невід'ємною тенденцією сучасної освіти. Побудова системи викладання та вивчення іноземних мов відповідно до сучасних тенденцій може забезпечити учнів відповідними для них стратегіями навчання, підвищити ефективність освітнього процесу та сприяти кращому досягненню навчальних цілей. Крім того, штучний інтелект може покращити знання іноземної мови швидше та ефективніше. Ця стаття починається з характеристики особливостей викладання іноземних мов з використанням досягнень штучного інтелекту. У статті проаналізовано методи викладання та оцінювання, а також зміну ролі викладачів іноземних мов. Метою є дослідження побудови системи навчання іноземної мови на основі штучного інтелекту та визначення її впливу на процес підвищення глибини та якості викладання іноземної мови, а потім формування стійкої та сприятливої моделі взаємодії.

Ключові слова: *штучний інтелект, викладання іноземних мов, смарт-технології, інструменти для оцінювання методів навчання, роль викладача.*

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