cultural diversity in education not only enriches the learning experience but also prepares students to thrive in an interconnected world.

References

1. Esling, P., Davis, N. *Creativity in the era of artificial intelligence. Journées d'Informatique Musicale,* 2020. Aug. 13 Préactes.

2. Das, S. The Meaning of Creativity Through the Ages: From Inspiration to Artificial Intelligence. *Creative business education: exploring the contours of pedagogical praxis.* Palgrave Macmillan, London, 2022. P. 27-53.

3. Kaufman, J. C., Sternberg, R. J. *The Cambridge handbook of creativity.* Cambridge University Press, 2010.

4. Matsumoto, D. Culture, Context, and Behavior. *Journal of Personality.* 2008. Vol. 75 (6). P.1285-1320.

5. Syzenko, A., Diachkova, Y. Building Cross-Cultural Competence in a Foreign Language through Technology-Enhanced Project-Based Learning. *Rev. Amaz. Investig.* 2020. Vol. 9. P. 411-418.

6. Watkins, D. Learning and Teaching: A cross-cultural perspective. S*chool Leadership and Management*. 2000. Vol. 20 (2). P. 161-73.

7. Zhu, C. Student Satisfaction, Performance, and Knowledge Construction in Online Collaborative Learning. *J. Educ. Technol. Soc.* 2012. Vol. 15. P. 127-136.

Дацків Ольга,
Шонь Олена
Тернопільський національний педагогічний університет
імені Володимира Гнатюка

CHAT GPT AS AN ASSISTANT IN STUDENTS' RESEARCH

According to LinkedIn's Future of Work report, the share of global English-language job postings on the platform mentioning GPT or ChatGPT has increased 21 times since November 2022, when OpenAI first released its AI chatbot into the world [3]. The report also found that the platform's users are rapidly adding AI-oriented skills to their profiles. It shows high demand for people with AI skills, increasing opportunities for job-seekers, and the need of higher education institutions (HEIs) to meet the challenge.

While some states and HEIs have blocked ChatGPT, most governments and HEIs are seeking ways to adjust to a world in which AI has become more widespread, accessible, and easy to use. According to UNESCO International Institute for Higher Education guide on ChatGPT and Artificial Intelligence in higher education, the chat "can be used but requires both care and creativity to ensure it is handled ethically and appropriately" [1, p. 13].

With rapid advancement of technology, university teachers all over the world cannot use the same materials for students as they did last year. Although concerns

have been voiced about "death" of academic essays, the LLM (large language model) implications for students' research have been less widely discussed.

The big worry in the research community is that students and scientists could deceitfully pass off LLM-written text as their own, or use LLMs in a simplistic fashion (such as to conduct an incomplete literature review) and produce work that is unreliable [3; 4; 5]. Since some students may be tempted to use Chat GPT to produce research papers, they should be informed about its possibilities and limitations. At the initial stage of this process we have prompted Chat GPT on what it can and cannot do while assisting pre-service teachers of foreign languages with writing a research paper, asked our students to do the same without specifying the prompts they used, analysed the responses, shared the results with students and discussed the implications of using Chat GPT in groups of students whose research papers we supervise. At the concluding stage together with students we created an infographic "Can do and can't do of ChatGPT for research" in Canva and developed a draft of guidelines for using Chat GPT in students' research.

What can ChatGPT do? The responses from ChatGPT on assistance it can provide pre-service foreign language teachers with writing a research paper included: topic selection and narrowing, research proposal outlining, literature review writing assistance, research methodology explanation, data analysis assistance, writing (revision and proofreading) assistance, advice on overcoming writer's block, research ethics, presentation and visualization, time management. The chat also made an acknowledgement we adopted in developing the guidelines draft, namely the necessity to consult with one's academic advisor or instructor for specific requirements related to one's research paper and to exercise critical thinking and academic integrity while seeking assistance from AI tools.

What can't ChaGPT do? The responses from ChatGPT on limitations it has while assisting pre-service teachers of foreign languages with writing a research paper included: lack of personalization, limited subject knowledge (up to the chat last training data in September 2021), no access to specific institutional guidelines, inability to provide specific guidance on ethical considerations, limited review of original research, citation accuracy, proofreading and grammar, limited context awareness. The chat warns pre-service teachers of foreign languages not to overly rely on ChatGPT's responses, as this could unintentionally lead to issues of plagiarism or academic dishonesty, and lists lack of real-time interaction in the form of discussion as another potential limitation.

The subsequent analysis proved that Chat GPT can write the abstract of the paper provided that it is given a correct prompt. The prompting technique can be improved by doing relevant research. The technology can reformat citations and footnotes styles such as APA, MLA, or Chicago. However, students should be aware that DSTU, State Standard of Ukraine 8302:2015 is not included in the list of styles the chat can work with. Moreover, the generated text can appear bland or contain errors. Also, the chat cannot correctly cite the sources used. Since Chat GPT cannot be held accountable for the work, it can't be attributed authorship. Scholarly journal *Nature* advises to document the use of Chat GPT in the methods or acknowledgements sections of a paper [5].

The technology relies on its training materials (till 2021) that do not include the latest research in the field. It cannot reason, analyse or evaluate, therefore it can't yet write literature review section properly. We asked the technology to list the top papers in our fields and have been offered entirely fictional lists of titles and authors. As of now, Chat GPT does not give researchers the ability to restrict data sources and provides too many of them which are often irrelevant to the researched problem. Much of the records of a digitized university archives are still inaccessible to ChatGPT, hence relying solely on the chat, students won't be able to include them in their research. Chat GPT can work well in tandem with a human to produce insightful research papers summarizing ideas and concepts and revising the text for clarity. It can also assist in correcting the use of foreign language. Using the tool, student researchers can devote more time to conducting experiments and less time to polishing final drafts.

The guidelines draft specifies that teachers will have different expectations, and it is important for students to verify what these expectations are before submitting their paper. When research advisors permit the students to use ChatGPT, the latter need to document the use of ChatGPT in the methods or acknowledgements sections of a paper. If a paper does not include these sections, the introduction or another appropriate section can be used to document the use of ChatGPT or any other large language model. The student should ask their research advisor if they have different expectations. There are significant privacy and security concerns to using ChatGPT that has not been checked through university information technology channels that students should be aware of. Recent developments show that AI is a technology that, although not embraced universally, can't be ignored. It is already changing the way we learn, teach and research. Used ethically, ChatGPT could provide students with a more relevant learning and research experience, and advance their research engagement.

References

1. *ChatGPT and Artificial Intelligence in higher education: Quick start guide.* The UNESCO International Institute for Higher Education. 2023. 14 p. Retrieved from: URL: https://www.iesalc.unesco.org/wp-content/uploads/2023/04/ChatGPT-and-Artificial-Intelligence-in-higher-education-Quick-Start-guide_EN_FINAL.pdf (last accessed 11.10.2023).

2. Grove, J. The ChatGPT revolution of academic research has begun. *Times Higher Education.* 2023. 16 March. Retrieved from: URL: https://www.timeshighereducation.com/depth/chatgpt-revolution-academic-research-has-begun (last accessed 11.10.2023).

3. Lukas, E. LinkedIn says ChatGPT-related job postings have ballooned 21-fold since November. Aug 17, 2023. Retrieved from: URL: https://www.forbes.com/sites/emmylucas/2023/08/17/linkedin-says-chatgpt-related-job-postings-have-ballooned-21-fold-since-november/?sh=195aefeb3fb8

4. Sullivan, M., Kelly, A., McLaughlan, P. ChatGPT in higher education: Considerations for academic integrity and student learning. *Journal of Applied*

Learning and Teaching. 2023. Vol. 6. No. 1. P. 31-40. DOI: https://doi.org/10.37074/jalt.2023.6.1.17.

5. Tools such as ChatGPT threaten transparent science; here are our ground rules for their use. *Nature.* 2023. 24 January. Retrieved from: URL: https://www.nature.com/articles/d41586-023-00191-1 (last accessed 11.10.2023).

Devitska Antonina,
Uzhhorod National University
Bilyk Olha
Vasyl Stefanyk Precarpathian National University

NEW CHALLENGES AND OPPORTUNITIES OF TEACHING EFL IN TIMES OF UNCERTAINTY

In an era characterized by unprecedented uncertainty, the ability to adapt and learn efficiently is more critical than ever. This article explores new challenges and opportunities of teaching English as a Foreign Language (EFL) in times of ambiguity and change. Drawing from relevant research, it examines the role of EFL in educational contexts, strategies for enhancing EFL skills, and the potential benefits for learners facing uncertainty.

In the face of ever-evolving challenges, individuals must develop the cognitive tools necessary for navigating uncertain terrains effectively. EFL is a critical component of education in many countries worldwide. It plays a multifaceted role in educational contexts, addressing various needs, from communication in a globalized world to enhancing cognitive development.

Learning a second language, including EFL, can have profound cognitive benefits. Research has shown that bilingualism, even in the context of learning English as a foreign language, enhances cognitive functions such as problem-solving, multitasking, and creativity [1]. The role of EFL extends beyond language skills; it can positively impact academic achievement, and EFL learners tend to perform better in standardized tests and develop stronger academic literacy skills. EFL education often includes exposure to a wider range of educational resources, leading to improved academic outcomes.

With the advent of technology, EFL education has evolved. The integration of digital tools and online resources has made EFL learning more accessible and engaging. Educational apps, virtual classrooms, and language learning platforms have expanded the role of EFL in education.

Uncertainty, whether in the form of global pandemics, wars, economic fluctuations, or technological disruptions, demands adaptive thinking and problem-solving skills. Research by Zelazo and Carlson [5, p. 356] emphasizes the role of EFL in predicting academic and life success, underscoring the importance of honing these skills in education. Since the access to traditional classroom settings may be limited during the time of crisis, the following strategies for Enhancing EFL skills are to be implemented.