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USING ARTIFICIAL INTELLIGENCE IN THE DEVELOPMENT OF FOREIGN LANGUAGE COMMUNICATIVE COMPETENCE OF LEARNERS IN A BLENDED LEARNING ENVIRONMENT

His study analyzes the functional potential and prospects of the AI for developing learners' foreign language communicative competence within blended learning. It examines how modern generative platforms (ChatGPT, Claude, Perplexity, Midjourney, DALL·E 3, Adobe Firefly, etc.) can create personalized, adaptive, and interactive learning environments. Integrating AI into instructional design enhances motivation, autonomy, and cognitive engagement, provides timely feedback, individualizes tasks, and supports foreign language acquisition in intercultural contexts. The advantages of AI implementation include optimizing teachers' work in content design, enabling leaener-centered and competence-based teaching, ensuring effective monitoring of progress, flexibility of learning, and access to authentic resources. However, the study also highlights risks such as ethical concerns, possible inaccuracy or bias in AI-generated data, insufficient digital literacy of users, and reduced analytical thinking due to overreliance on learning automation. The teacher's role in AI-supported blended learning is redefined as that of a facilitator, mentor, and coordinator. Effective AI use in foreign language education requires pedagogically grounded integration of digital tools, fostering learners' critical evaluation and verification skills, and maintaining balance between innovation, e-resources, and traditional methods.

Key words: *blended learning, artificial intelligence, foreign language education, foreign language communicative competence, digital technologies.*

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ВИКОРИСТАННЯ ШТУЧНОГО ІНТЕЛЕКТУ У ФОРМУВАННІ ІНШОМОВНОЇ КОМУНІКАТИВНОЇ КОМПЕТЕНТНОСТІ ЗДОБУВАЧІВ ОСВІТИ В УМОВАХ ЗМІШАНОГО НАВЧАННЯ

У дослідженні представлено аналіз функціональних можливостей та перспектив використання штучного інтелекту (ШІ) у процесі формування іншомовної комунікативної компетентності здобувачів освіти в умовах змішаного навчання. Розглянуто потенціал сучасних генеративних платформ (ChatGPT, Claude, Perplexity, Midjourney, DALL·E 3, Adobe Firefly тощо) у створенні персоналізованого, адаптивного та інтерактивного навчального середовища. Актуальність дослідження полягає у необхідності визначення ефективних шляхів інтеграції штучного інтелекту у змішане навчання для формування іншомовної комунікативної компетентності та підвищення якості навчально-пізнавальної діяльності в умовах сучасного розвитку освіти та глобалізаційних процесів. Метою дослідження є аналіз потенціалу інструментів штучного інтелекту, переваг та ризиків їх використання в освітньому процесі для формування іншомовної комунікативної компетентності в умовах моделі змішаного навчання, що сприяє підвищенню мотивації, автономності та ефективності навчання через інтерактивність та персоналізацію освітнього процесу. Інтеграція ШІ у дизайн навчального процесу сприяє підвищенню мотивації, автономності та пізнавальній активності здобувачів освіти, забезпечує оперативний зворотний зв'язок, індивідуалізацію завдань і формування іншомовних компетентностей у контексті міжкультурного спілкування. Окреслено переваги впровадження ШІ у навчання іноземних мов, зокрема: оптимізація діяльності вчителів на етапах проєктування навчального контенту; можливості використання сучасних і ефективних методик навчання іноземних мов з урахуванням особистісно зорієнтованого, компетентнісного підходів; ефективний моніторинг навчальних досягнень; адаптивність, гнучкість процесу навчання та доступність автентичних ресурсів для здобувачів освіти. Разом із тим, проаналізовано ризики, пов'язані з використанням ШІ, серед яких: етичні проблеми, можливість отримання неточної або упередженої інформації, потреба у цифровій грамотності як вчителів, так і здобувачів освіти та небезпека зниження аналітичного мислення внаслідок надмірної зосередженості на автоматизації навчання. Окреслено роль вчителя, який у змішаному навчанні з підтримкою ШІ виступає як фасилітатор, наставник та координатор освітнього процесу. Зроблено висновок, що ефективне використання ШІ у навчанні іноземних мов можливе за умови педагогічно обґрунтованої інтеграції цифрових технологій, формування у здобувачів освіти навичок критичного сприйняття, оцінювання та перевірки інформації, а також збереження балансу між інноваціями в освіті, електронними ресурсами та традиційними методами навчання.

Ключові слова: *змішане навчання, штучний інтелект, іншомовна освіта, іншомовна комунікативна компетентність, цифрові технології.*

The current stage of educational development, shaped by globalisation, expanding international cooperation and growing cross-cultural interaction, is marked by the rapid introduction of digital technologies that are transforming approaches to the organisation of the educational process. One of the most dynamically growing and progressive areas is the application of artificial intelligence (AI) in foreign language teaching, based on the development of communication skills. AI-based platforms are a powerful tool for improving the effectiveness of educational and cognitive activities and can provide individualised learning, adaptive selection of educational content, automatic feedback, simulation of an authentic language environment, diagnosis of learners' knowledge and its analytical interpretation. Combining traditional and online formats blended learning creates favourable conditions for the use of AI tools that can enhance interaction between participants in the educa-

tional process and improve the quality of foreign language training. Given the growing demands for foreign language proficiency and the rapid development of educational technologies, the search for optimal ways to integrate AI into the formation of foreign language communicative competence (FLC) in a blended learning environment is an important and timely task for modern foreign language teaching methodology. Methodological approaches and evaluation criteria for these innovative technologies need further refinement, as does the analysis of possible negative effects from their overuse or misuse.

The body of research on various aspects of using artificial intelligence in education is highly diverse. Notable contributions include the works of O. Semenikhina, V. Riznyk, V. Shamony (the use of AI in scientific research in the context of academic integrity), I. Vizniuk, S. Dolynnyi, O. Zubenko, M. Kademiia, V. Krasnopolskyi, Yu. Kurylo, K. Novik, A. Polishchuk, N. Khairulina, V. Chetverik (AI in foreign language learning), A. Banartseva, L. Malyhina (AI as a multimodal language teaching system), V. Chaika, I. Yaroshchuk (AI as a means of creating and implementing individual development programmes for children with special educational needs), and others. Theoretical research on the effectiveness of AI in the educational process has been conducted by Ya. Berehova, N. Borysenko, T. Polukhtovich, B. Linnik, M. Tsuryk, and others. Certain aspects of using artificial intelligence are of interest to such scholars as I. Vlchkova, D. Hartmann, U. Mendel, O. Nickel, A. Poleshchuk, A. Renz, M. Fischer, T. Schatz, L. Schultz, K. Schmidt-Mayer, T. Strasser, and others. However, despite existing developments, the issue of foreign language teaching with the help of AI remains open in the scientific field for further refinement, development and discussion.

The objective of this paper is to analyse the potential of AI tools, the advantages and risks of their use in the educational process for the formation of foreign language communicative competence in the context of the blended learning model, which contributes to increasing the motivation, autonomy and effectiveness of learning through interactivity and personalisation of the learning process.

A detailed study of contemporary scientific literature allows us to conclude that foreign language learning involves the acquisition, processing and assimilation of new knowledge, skills by learners, as well as the search for and use of external recommendations. It is important to realise that, ultimately, educational activities should not simply provide learners with a certain amount of knowledge, abilities or skills, but should also develop a level of competence based on the principles of self-sufficient, conscious and effective life activity in various spheres of human life [8, p. 105], contribute to competitiveness in the labour market and the formation of a successful career, and understanding the peculiarities of intercultural communication [10]. In a world of constant globalisation changes, the ability to use a foreign language effectively in oral and written communication is becoming one of the key competencies, requiring knowledge of vocabulary and functional grammar and awareness of the main types of verbal interaction and language registers. It is important to know social conventions and to take into account cultural aspects and language variability.

The main goal of foreign language teaching in secondary schools is to teach students to use language as a tool for intercultural interaction and communication [9, p. 39]. Foreign language classes play a key role in preparing students for real authentic language situations, in particular by developing effective communication skills and the ability to learn independently. To stimulate students' communicative activity in traditional foreign language classes, educators employ personality-oriented forms and methods that foster the development of speech skills. These include creating an atmosphere of trust and respect, incorporating emotionally meaningful content into lessons, using dialogue as the primary mode of communication, and offering students freedom of choice in completing tasks. Other effective strategies involve encouraging self-assessment and personal growth, applying various forms of interaction (individual, pair, group, collective), and fostering a positive emotional climate that supports creativity and active participation by all learners.

Despite the proven effectiveness of traditional methods, modern educational realities require the implementation of innovative solutions that support individualisation, interactivity, adaptability of the learning process, and the development of self-learning skills in the context of intellectual development. One potential solution involves the integration of artificial intelligence technologies in the educational process. AI is an effective tool for developing communication skills, as it allows for personalised learning, adaptation of knowledge to the level of knowledge and skills of the learner, stimulates language activity, enables the modelling of communication situations, for example, through authentic communication with chatbots in a foreign language, and creates or compiles new content of various types. Learners are offered instant feedback and automatic assessment in real time (analysis of pronunciation, grammatical concepts, vocabulary), while tools for stimulating autonomous learning allow you to select and consciously manage contextualised content, ensure individualisation of the pace of learning, and create an immersive educational environment.

The spread of AI applications in education necessitates the re-evaluation of traditional approaches to the organisation of the learning process. The use of artificial intelligence covers a wide range of educational practices: from personalised systems and dialogue platforms to interdisciplinary research-based learning supported by AI algorithms, in particular designing and developing virtual assistants, intelligent tutors, using agents in a gamified environment, chatbots, tools for selecting learning partners or tutors, creating tests for self-assessment, lexical and grammatical exercises, compiling lists of language templates, selection of synonyms/antonyms for lexical units, development of training programmes for language courses, creation of authentic communicative situations, as well as modelling the interaction of learners with digital systems at both the individual and institutional levels [10; 1; 5]. Such approaches aim to provide an adaptive, flexible and effective educational environment that combines the advantages of traditional learning with the capabilities of modern dynamic technologies.

The use of blended learning models in the educational process, particularly in foreign language classes, involves organising educational activities in such a way that students acquire knowledge without compromising its quality by combining core educational content (textbooks and teaching materials) with external materials (electronic resources), as well as through a combination of different formats of educational and cognitive activities: in face-to-face learning (through direct interaction with the teacher and other participants in the educational process) and in the format of independent work (online, using modern information and communication technologies). A variation of the rotational model of blended learning is the 'flipped classroom' technology, which allows srtudents to study part of the course content independently before class and then engage in group discussions, practical applications, consultations with the instructor, or exploration of new theoretical topics during class time.

The difference between this concept and traditional approaches lies in the ability to learn the material at a time convenient for students, using modern digital devices. Unlike distance learning, the blended learning model preserves elements of live communication with the teacher and other participants in the learning process, which contributes to the formation of the necessary knowledge and skills. In this case, a computer or other digital device is not an end in itself, but a tool for organising an effective educational environment [7, p. 113].

Artificial intelligence technologies play a special role in the blended learning model, opening up new opportunities for the implementation of adaptive learning. Empirical research shows that the integration of AI tools into blended learning provides a qualitatively new level of educational interaction, stimulates the cognitive activity of learners, promotes the development of their learning autonomy, and shapes their readiness for effective self-realisation of intercultural communication. The growing emphasis on learner autonomy in the educational process results in e redefinition of the teacher's role, who in this model acts primarily as a facilitator, mentor and coordinator of the online learning component supported by AI technologies.

In the context of foreign language learning, AI-based applications provide support to learners studying foreign languages, in particular with the aim to develope communicative competence. This is achieved through the use of speech recognition technologies, automated feedback and tools for improving pronunciation, grammatical skills, vocabulary and speech expressiveness. Special attention in this regard is paid to generative artificial intelligence, which is understood as 'technologies capable of independently creating new data or content based on generative algorithms' [2], such as systems capable of generating text, images, music, video, and audio materials based on text prompts. Generative AI-based programmes such as ChatGPT, Copilot, Gemini, Neuroflash, etc. create opportunities for authentic interaction, which promotes a better understanding of language in a natural context and the development of the ability to express oneself in real-life language situations. Chatbots Claude and Perplexity operate on the basis of so-called Large Language Models (LLMs) – complex algorithmic systems capable of processing and generating natural language. These technologies have great potential for integration into the foreign language learning process, opening up wide opportunities for its improvement and individualisation. They increase the confidence of learners by enabling them to study in a safe environment where they can communicate freely, identify and analyse possible language difficulties and barriers. Due to their ability to respond in real time to the individual requests and needs of students, these tools contribute to the creation of an interactive learning environment adapted to the pace, learning style and level of knowledge of learners [2].

Based on research into the potential of artificial intelligence, we can identify the basic opportunities for making foreign language classes more effective, with a focus on developing foreign language communication skills in a blended learning model through:

– personalised learning programmes: AI analyses students' learning strategies and, on this basis, allows the creation of learning plans and content tailored to the needs and level of preparation of the learner; AI platforms

can change the level of difficulty of tasks in real time depending on the learner's results, which allows for a more accurate assessment of their level of foreign language proficiency;

– chatbots and tutor systems: AI tools can help train authentic dialogues through voice input systems and answer questions in a foreign language;

– tools for automatic assessment of listening, speaking, reading and writing skills: AI is capable of analysing communication, pronunciation, vocabulary and grammar used in speaking, reading and writing, providing quick feedback, adequately analysing mistakes and helping to overcome language barriers and lexical difficulties; AI systems provide instant analytics: which elements – keywords, intonation, logical connections – were understood or missed during listening, and outline recommendations for improving listening skills; for learners with special educational needs, AI can adjust the playback speed, add subtitles or visual cues, while maintaining the objectivity of the assessment.

– interactive learning materials: AI can be used to create teaching materials with interactive elements tailored to the needs of learners, making learning diverse and interesting; interactive dialogues with virtual interlocutors, multimedia exercises with gamification elements, simulations of real communication situations, or trainers for practising specific language skills (lexical, grammatical, phonetic) can increase the effectiveness of foreign language communication skills development in the process of independent work by learners;

– virtual classrooms: AI can facilitate access to educational resources and promote interaction between students and teachers at certain stages of online learning [6, p. 124].

Let us outline the possibilities of using some modern AI tools [4] in foreign language teaching (FL) in the form of a table:

Table 1

Potential Applications of Modern AI Tools in Foreign Language Education

AI tool	Functionality	Possibilities for use in FL teaching
ChatGPT, Gemini, Copilot	Generative AI for text processing, dialogue interaction, and data analysis.	Modelling dialogues and role-playing games; automatic creation of exercises and tests; grammar explanations, interactive writing and speaking practice; personalised learning.
Midjourney, BlueWillow.ai, Leonardo.ai	Generation of images based on text descriptions.	Creating authentic visual materials to illustrate vocabulary, cultural topics and communicative situations; developing flashcards, infographics and illustrated tasks; creating visual stimuli for oral and written exercises.
Canva	Design platform with integrated AI features (image generation, autotext, templates, etc.)	Creating interactive presentations, posters, infographics, and worksheets; organising project activities; visualising grammatical structures and lexical fields.
Suno.ai	Music and audio content generator	Creating background audio for educational materials; generating songs and rhyming texts for memorising vocabulary; developing authentic audio scenarios for listening practice.
Gamma.app	Automated creation of presentations and structured learning content	Creating educational slides, structured notes and lesson plans; use by students for project work in a foreign language.
Microsoft Designer	Creating visual materials based on text descriptions.	Creating posters, advertising layouts and educational visual materials; completing creative assignments that involve image descriptions or producing advertising texts in a foreign language.
DALL-E 3, Adobe Firefly, Adobe Express	Image and graphics generation, visual content editing.	Making illustrations for lessons; designing educational posters and infographics; using visual teaching materials for communication tasks.
D-ID	Generation of animated videos with an avatar that can communicate.	Creating video exercises for training foreign language listening comprehension; modelling authentic dialogues; preparing visualised instructions for students.
PrompBase.com, Lexica.art	Libraries of ready-made prompts and examples of visual content	Using ready-made text queries to create teaching materials; quickly creating illustrations and visual lesson plans; building a resource base for teachers.
Claude	A generative chatbot based on a language model, optimised for long texts, contextual analysis and logical reasoning.	Creating educational texts and dialogues; explaining grammatical and lexical phenomena; analysing and editing students' written work; modelling role-playing games and authentic communicative situations with a high level of contextual accuracy.
Perplexity	Search-oriented AI assistant with integrated natural language capabilities and automatic source referencing.	Searching for authentic materials in a foreign language with verified sources; preparing thematic dictionaries and glossaries; creating tasks based on real articles and news; developing reading comprehension and critical analysis skills; training skills for working with information in an intercultural context.

The use of artificial intelligence tools is not an end in itself, but is linked to specific expectations for more effective organisation of the learning and teaching process, reducing the burden on teachers in performing routine tasks, and facilitating the achievement of learning objectives. AI can contribute to maximum efficiency and productivity with minimal time expenditure (time management) when modelling/modifying educational content; diversifying the educational process; more effective management of learning phases; and operational monitoring of the academic achievements of students and their analytical interpretation. The use of generative chatbots also makes it possible to enrich independent study with creative tasks and automated feedback, allowing students to receive immediate individual feedback on the strengths and weaknesses of their answers and recommendations for improving their results [3].

Considering the above-mentioned features of AI resources, it can be noted that the use of AI in the process of learning foreign languages has significant advantages for students: automated text assessment systems can promote autonomous learning and the development of self-correction skills, increase internal motivation to improve language skills, and facilitate a deeper analysis of language errors. Interacting with an AI bot in text or voice form before performing oral tasks can improve oral speech performance and develop critical and analytical thinking. Provided that teachers provide specific prompts, communication protocols between chatbots and learners make it possible to identify typical errors more accurately and plan further stages of learning in a more targeted and effective manner. It should be emphasised that the implementation of these opportunities largely depends on the level of digital competence and motivation of teachers to introduce AI technologies into the learning process [3].

Recent studies show that students are generally very eager to use AI tools in the learning process. Most of them have experience working with text-generating AI systems and apply them in various learning situations. According to the Bavarian Research Institute for Digital Transformation at the Bavarian Academy of Sciences, half of the students surveyed confirmed that the use of generative AI contributed to an increase in their personal performance. An even higher percentage of respondents agreed that these technologies made the learning process easier. It is noteworthy that 45% of respondents reported an improvement in their academic performance without an additional increase in their workload [3].

The high level of integration of AI applications into the daily lives of students is another argument in favour of their systematic use in foreign language education. These tools can effectively help in correcting mistakes and improving texts. At the same time, teachers bear significant responsibility for developing students' ability to use such technologies competently and ethically. This involves not only the technical aspects of the work, but also the ability to analyse the results of AI and verify their accuracy. It can be argued that by cultivating these skills, teachers are preparing students for a future in which the use of artificial intelligence will be an essential component of their professional and academic endeavors.

Therefore, the use of artificial intelligence technologies in foreign language teaching opens up new opportunities for enhancing the effectiveness of the educational process. In particular, the following key advantages can be highlighted:

1. Personalisation of learning: AI algorithms can adapt learning materials and tasks to the individual learner's needs and cognitive style, providing a personalised trajectory for the development of foreign language competence. This includes the automatic creation of lexical and grammatical exercises, thematic and terminological vocabulary lists, synonymic and antonymic series, as well as targeted tasks, exercises, and tests addressing specific weaknesses or knowledge gaps.

2. Instant feedback: AI systems automatically analyse and correct learners' mistakes in real time, which helps to quickly eliminate gaps in knowledge and language barriers. The use of generative chatbots makes it possible to supplement independent learning modules with creative tasks and automatically generated feedback, which provides learners with immediate information about the strengths and weaknesses of their answers and attempts to solve tasks, as well as recommendations on possible ways to improve them.

3. Linguistic authenticity and immersion in the educational environment: generative models can create content that is close to real-life communication situations, thus providing conditions for immersive learning.

4. Accessibility and flexibility: AI-oriented learning platforms ensure high flexibility in the organisation of learning and expand opportunities for access to quality educational resources in the field of foreign languages.

5. Support and mentoring: AI-powered resources support learners' aspirations to master a foreign language independently and prepare for international language exams.

6. Promoting inclusivity in the educational process: support for students with special educational needs, e.g. speech recognition for students with hearing impairments; conversion of text to audio material for students with visual impairments; use of augmented reality applications in the context of developing social skills in children with autism spectrum disorders.

7. Opportunities for optimising teachers' activities: automating routine tasks in the preparation and processing of teaching materials, diversifying the forms and methods of conducting classes, ensuring effective monitoring of the academic performance of students.

We believe that artificial intelligence technologies should be used as a supplement to the educational process, not as a substitute for live communication in the learning process and independent study of material. The correct use of AI can significantly enrich foreign language classes and improve the process of developing foreign language communication skills, although it also carries certain challenges and risks, namely:

1. Limited ability to interpret the culture of the country whose language is being studied: although AI can reproduce linguistic structures, it still lacks a systematic understanding of cultural values and the pragmatic aspects of intercultural communication.

2. Risk of superficial knowledge formation: excessive reliance on automated prompts can reduce the level of critical and analytical thinking and independence of learners, as well as the depth of understanding of issues.

3. Problems with the reliability and quality of educational content: there is a possibility of generating false or inaccurate language examples, especially in complex grammatical or stylistic constructions, which necessitates critical evaluation of the generated information.

4. Ethical and confidentiality risks: the collection and storage of users' personal data requires compliance with high standards of information protection; the principles of academic integrity and digital hygiene should also be taken into account.

5. Insufficient level of personal communication: the use of artificial intelligence may lead to a reduction in direct contact between people, which is an important element of the educational process for some learners.

6. The need for digital literacy: the effectiveness of AI depends on the level of functional literacy in the use of digital devices by both teachers and students.

The use of artificial intelligence in the process of learning foreign languages opens up new prospects for enhancing the effectiveness of learning, ensuring the individualisation of the educational process, and creating an adaptive, interactive, and motivational educational environment. The integration of generative chatbots, intelligent learning platforms, and other AI tools contributes to expanding the opportunities for teachers to plan, organize, and conduct classes taking into account innovative, personality-oriented, competency-based, and integrated learning; modelling educational content and assessing the achievements of learners in the context of developing their positive self-esteem, self-identity and motivation to learn. Participants in the educational and cognitive process can receive prompt automated feedback, solve individual tasks adapted to their learning style, and form a flexible educational trajectory for personal growth.

At the same time, the introduction of AI technologies requires a critical approach, adequate digital literacy of both teachers and learners, and adherence to ethical principles, particularly in terms of academic integrity, data confidentiality, and equal access to quality resources. It is necessary to ensure a harmonious balance between the excessive use of generative systems and the preservation of the value of traditional learning in the context of live communication and pedagogical support.

The data obtained confirm the need for further research aimed at a detailed analysis of the use of AI technologies to enhance the process of foreign language learning.

BIBLIOGRAPHY
1. Bialik M., Fadel C., Holmes W. Artificial Intelligence in Education: Promises and Implications for Teaching and Learning. The Center for Curriculum Redesign. Boston, 2019. URL: https://curriculumredesign.org/wp-content/uploads/AIED-Book-Excerpt-CCR.pdf (acceess date: 29.08.2025)
2. Hartmann D. Künstliche Intelligenz im DaF-Unterricht. Mediation mit KI-Anwendungen fördern. *Revista Lengua Y Cultura*. 2024. Vol. 5. № 10. p. 50–55. DOI: https://doi.org/10.29057/lc.v5i10.12218
3. Poleshchuk A., Schatz Th. Fremdsprachenunterricht mit KI gestalten. Eine Handreichung für die Praxis. *Harzer Hochschultexte*. 2024. Nr. 16 Hochschule Harz, Wernigerode. URL: https://opendata.uni-halle.de/bitstream/1981185920/118685/1/Fremdsprachenunterricht%20mit%20KI%20gestalten%20-%20HHT%2016.pdf (acceess date: 29.08.2025)
4. Sotelo C. Künstliche Intelligenz im FSU. Cornelsen. 06.06.2024. URL: https://www.goethe.de/resources/files/pdf333/ki-im-fsu_getvico24_carlos-sotelo-v1.pdf (acceess date: 29.08.2025)
5. Tobor J. Blickpunkt – Leitlinien zum Umgang mit generativer KI. *Hochschulforum Digitalisierung*. 07.02.2024. URL: https://hochschulforumdigitalisierung.de/wp-content/uploads/2024/02/HFD_Blickpunkt_KI-Leitlinien_final.pdf (acceess date: 29.08.2025)

6. Vlčková I. Nutzung der künstlichen Intelligenz im Fremdsprachenunterricht. *ACC Journal*. 2023. 29 (3). DOI: https://doi.org/10.2478/acc-2023-0020.

7. Коваленко О. О., Конопляник Л. М. Використання засобів змішаного навчання при викладанні англійської мови професійного спрямування у ВНЗ. *Інноваційна педагогіка: науковий журнал*. 2019. Т. 2, № 10. С. 111–116.

8. Обіход. І., Закордонець Н., Плавуцька О. Реалізація комунікативно-діяльнісного підходу у сучасній системі навчання іноземної мови. *Наукові записки Тернопільського національного педагогічного університету імені Володимира Гнатюка. Серія : педагогіка*. 2021. № 2. С. 104–113.

9. Поселецька К., Кушнір С. Формування та розвиток комунікативних здібностей на уроках німецької мови. *Journal of Cross-Cultural Education*. 2024. № 4. С. 39–48. DOI: https://doi.org/10.31652/2786-9083-2024-4-39-48

10. Четверик В. К. Ресурси зі штучним інтелектом у навчанні іноземним мовам: огляд можливостей та перспектив використання. *Сучасні інформаційні технології та інноваційні методики навчання в підготовці фахівців. Сучасні інформаційні технології та інноваційні методики навчання в підготовці фахівців: методологія, теорія, досвід, проблеми*. 2024. Вип. 72. С. 205–219. DOI: https://doi.org/10.31652/2412-1142-2024-72-1-228

REFERENCES

1. Bialik, M., Fadel, C., & Holmes, W. (2019). *Artificial intelligence in education: Promises and implications for teaching and learning*. Boston, MA: The Center for Curriculum Redesign. https://curriculumredesign.org/wp-content/uploads/AIED-Book-Excerpt-CCR.pdf [in English].

2. Hartmann, D. (2024). Künstliche Intelligenz im DaF-Unterricht. Mediation mit KI-Anwendungen fördern [Artificial intelligence in German as a Foreign Language (GFL) teaching. Promoting mediation with AI applications]. *Revista Lengua y Cultura, 5*(10), 50–55. https://doi.org/10.29057/lc.v5i10.12218 [in German].

3. Poleshchuk, A., & Schatz, T. (2024). Fremdsprachenunterricht mit KI gestalten: Eine Handreichung für die Praxis [Foreign language teaching with AI: A practical guide]. *Harzer Hochschultexte, 16*. Hochschule Harz, Wernigerode. https://opendata.uni-halle.de/bitstream/1981185920/118685/1/Fremdsprachenunterricht%20mit%20KI%20gestalten%20-%20HHT%2016.pdf [in German].

4. Sotelo, C. (2024, June 6). *Künstliche Intelligenz im FSU* [Artificial intelligence in FSU]. Cornelsen. https://www.goethe.de/resources/files/pdf333/ki-im-fsu_getvico24_carlos-sotelo-v1.pdf [in German].

5. Tobor, J. (2024, February 7). *Blickpunkt – Leitlinien zum Umgang mit generativer KI* [Focus – Guidelines for using generative AI]. Hochschulforum Digitalisierung. https://hochschulforumdigitalisierung.de/wp-content/uploads/2024/02/HFD_Blickpunkt_KI-Leitlinien_final.pdf [in German].

6. Vlčková, I. (2023). Nutzung der künstlichen Intelligenz im Fremdsprachenunterricht [Use of artificial intelligence in foreign language teaching]. *ACC Journal, 29*(3). https://doi.org/10.2478/acc-2023-0020 [in German].

7. Kovalenko, O. O., & Konoplianyk, L. M. (2019). Vykorystannia zasobiv zmishanoho navchannia pry vykladanni anhliiskoi movy profesiinoho spriamuvannia u VNZ [Use of blended learning tools in teaching English for specific purposes in higher education institutions] *Innovatsiina pedahohika: Naukovyi zhurnal, 2*(10), 111–116 [in Ukrainian].

8. Obikhod, I., Zakordonets, N., & Plavutska, O. (2021). Realizatsiia komunikatyvno-diialnisnoho pidkhodu u suchasnii systemi navchannia inozemnoi movy [Implementation of the communicative and activity-based approach in the modern system of foreign language teaching]. *Naukovi zapysky Ternopilskoho natsionalnoho pedahohichnoho universytetu imeni Volodymyra Hnatiuka. Seriia: Pedahohika*, (2), 104–113. [in Ukrainian]

9. Poseletska, K., & Kushnir, S. (2024). Formuvannia ta rozvytok komunikatyvnykh zdibnostei na urokakh nimetskoi movy [Formation and development of communicative skills in German language lessons]. *Journal of Cross-Cultural Education, 4*, 39–48. https://doi.org/10.31652/2786-9083-2024-4-39-48[in Ukrainian]

10. Chetveryk, V. K. (2024). Resursy zi shtuchnym intelektom u navchanni inozemnym movam: ohliad mozhlyvostei ta perspektyv vykorystannia [AI-based resources in foreign language education: A review of opportunities and prospects for use]. *Suchasni informatsiini tekhnolohii ta innovatsiini metodyky navchannia v pidhotovtsi fakhivtsiv: Metodolohiia, teoriia, dosvid, problemy, 72*, 205–219. https://doi.org/10.31652/2412-1142-2024-72-1-228 [in Ukrainian]