Pedagogical sciences

UDC 811.111:37.016

Agadzhanova Radmila

Senior Lecturer of the Department of

Pedagogy, Foreign Philology and Translation

Simon Kuznets Kharkiv National University of Economics

CURRENT TRENDS AND PERSPECTIVES OF ARTIFICIAL INTELLIGENCE IN ENGLISH LANGUAGE TEACHING

Summary. *The article considers the role of Artificial Intelligence in higher education, focusing on its integration into English language teaching. It analyses current trends in AI integration, highlighting how intelligent technologies support personalised, student-centred learning through adaptive content delivery, performance analysis, and immediate feedback. Particular attention is given to emerging AI-driven tools such as chatbots, virtual and augmented reality, and gamification, which enhance learner engagement, interaction, and autonomy while creating more immersive and flexible learning environments. The article also describes future perspectives of AI in English language teaching, emphasising its potential to further reshape pedagogical practices and expand access to language learning. At the same time, key challenges are addressed, including limited technological infrastructure, insufficient teacher training, and ethical concerns regarding data use. The article concludes that while AI offers significant opportunities for innovation, its effective implementation requires a balanced, human-centred approach to ensure meaningful and sustainable improvements in English language teaching and learning.*

Key words: *Artificial Intelligence, English language teaching, chatbots, gamification, student-centred learning, virtual and augmented reality.*

It is common knowledge that digital technologies have profoundly transformed higher education, with Artificial Intelligence (AI) emerging as a key driver of innovation in teaching and learning [1]. Within this evolving landscape, the integration of AI into English language teaching (ELT) has gained particular significance, as it directly influences the development of learners' linguistic, communicative, and intercultural competencies. AI technologies – capable of simulating human intelligence through processes such as learning, reasoning, and natural language processing – are increasingly embedded in pedagogical practices, fostering more dynamic, interactive, and student-centred approaches to language education [2].

A central aspect of this transformation is the growing use of AI-powered tools such as chatbots, virtual and augmented reality (VR/AR) environments, and gamified learning platforms. Chatbots, driven by natural language processing, enable learners to engage in real-time conversations, practice dialogue skills, and receive immediate, personalised feedback. These tools create low-anxiety environments that encourage experimentation with language, thereby enhancing learners' confidence and communicative competence. At the same time, VR technologies offer immersive learning experiences, allowing students to interact in simulated real-world contexts – such as virtual classrooms, cultural settings, or professional environments – which significantly improves contextualised language acquisition and intercultural awareness.

In addition, gamification – defined as the application of game design elements in non-game contexts – has become an effective strategy for increasing student motivation and engagement in English learning. AI-driven gamified platforms can adapt tasks to learners' proficiency levels, track progress, and provide rewards, challenges, and instant feedback. This not only promotes sustained engagement but also supports the development of autonomous learning habits. By combining entertainment with educational objectives, gamification

transforms traditional language instruction into an interactive and motivating experience [3].

The integration of these technologies contributes to a shift from standardised, teacher-centred models to personalised, flexible learning environments. AI systems can analyse learners' performance, identify individual needs, and tailor instructional content accordingly. As a result, students benefit from customised learning pathways that address specific difficulties in grammar, vocabulary, pronunciation, and communication skills. Furthermore, these technologies extend learning beyond the classroom, enabling continuous practice and access to educational resources anytime and anywhere.

However, despite its considerable potential, implementing AI-driven tools in English language teaching also presents several challenges. These include the need for adequate technological infrastructure, the development of teachers' digital competencies, and ethical concerns related to data privacy and algorithmic bias. Moreover, while chatbots, VR, and gamification enhance interactivity and personalisation, they cannot fully replace the human dimension of teaching, particularly in fostering critical thinking, emotional support, and meaningful social interaction.

Therefore, this article aims to explore the integration of AI into English language teaching in higher education, with a particular focus on chatbots, virtual reality, and gamification. It considers their impact on student motivation, engagement, and learning outcomes, as well as the challenges associated with their implementation. By analysing current trends and practices, this research contributes to a deeper understanding of how innovative AI-based approaches can be effectively leveraged to enhance the quality and accessibility of English language education in contemporary academic contexts.

The integration of AI into higher education has led to a fundamental transformation of teaching pedagogy, shifting it from traditional, teacher-centred approaches toward more adaptive, learner-centred models. AI technologies,

particularly those based on machine learning and natural language processing, enable the creation of intelligent educational systems that can analyse learner behaviour, monitor progress, and dynamically adjust instructional strategies. As a result, pedagogy is no longer static but becomes responsive to individual student needs, promoting deeper understanding and more meaningful learning experiences.

One of the most significant pedagogical impacts of AI is the emergence of personalised learning environments. AI-powered systems can collect and process large amounts of data on students' performance, learning pace, and cognitive patterns, enabling the customisation of content and learning pathways. This level of personalisation supports differentiated instruction, ensuring that learners receive targeted feedback and resources that correspond to their abilities and learning styles. Consequently, AI enhances both the effectiveness and inclusivity of teaching by addressing diverse learner needs and reducing achievement gaps [1].

Furthermore, AI integration promotes a redefinition of the teacher's role within the educational process. Rather than serving solely as knowledge transmitters, educators increasingly act as facilitators, mentors, and designers of learning experiences. AI systems function as supportive tools that assist in tasks such as assessment, feedback provision, and content delivery, thereby allowing instructors to focus on higher-order pedagogical functions, including critical thinking development, collaboration, and student engagement. This shift reflects a move toward a more collaborative, interactive teaching model, in which human and technological agents work together to enhance learning outcomes.

In addition, AI contributes to the development of data-driven pedagogy. Through continuous assessment and real-time analytics, educators can gain insights into student progress and learning difficulties, enabling timely pedagogical interventions. Intelligent tutoring systems, for example, can provide immediate feedback and scaffold learning processes, while learning management

systems integrated with AI can recommend resources and activities based on individual performance. Such approaches increase teaching efficiency and support evidence-based decision-making in instruction [1].

However, the successful integration of AI into teaching pedagogy requires careful consideration of several challenges. One of the primary issues is educators' limited preparedness to effectively incorporate AI into their teaching practices. Studies indicate that many instructors lack a sufficient understanding of AI technologies, hindering their ability to fully exploit AI's pedagogical potential. Additionally, infrastructural limitations, such as inadequate access to digital devices and stable internet connectivity, may restrict the implementation of AI-enhanced learning environments.

Ethical considerations also play a crucial role in shaping AI-integrated pedagogy. Concerns related to data privacy, algorithmic bias, and academic integrity must be addressed to ensure responsible and equitable use of AI technologies. Moreover, there is a risk of over-reliance on AI tools, which may reduce students' critical thinking and independent learning skills if not properly managed. Therefore, it is essential to adopt a balanced approach that combines technological innovation with human-centred pedagogical principles [2].

Overall, the impact of AI on teaching pedagogy in higher education is both transformative and multifaceted. Its integration enables personalised, data-driven, and interactive learning environments while redefining the roles of educators and learners. At the same time, effective implementation depends on addressing technological, pedagogical, and ethical challenges. When thoughtfully integrated, AI has the potential to significantly enhance teaching and learning processes, contributing to the development of more adaptive, inclusive, and future-oriented educational systems [1].

To contextualise the pedagogical transformations discussed above, it is essential to consider how specific AI-driven technologies operationalise these changes in English language teaching practice. In particular, the use of chatbots,

AR/VR, and serious games through gamification represents concrete manifestations of AI integration that directly influence teaching practices and learning experiences. These technologies embody the principles of personalisation, interactivity, and learner-centeredness by enabling real-time communication, immersive contextual learning, and motivation-driven engagement. Chatbots facilitate continuous language practice and immediate feedback; AR and VR environments provide authentic, situational language use, while gamified platforms enhance motivation through structured challenges and rewards. Together, they illustrate how AI not only reshapes pedagogical frameworks but also offers practical solutions for enhancing language acquisition. Therefore, it is important to examine these technologies in detail, highlighting their pedagogical potential and impact on student engagement and learning outcomes in English language education.

The integration of AI chatbots into English language teaching represents a significant shift toward interactive, personalised, and technology-enhanced learning environments. Chatbots are increasingly seen as innovative pedagogical tools capable of transforming traditional approaches to language instruction by enabling real-time communication, adaptive learning, and continuous learner support [3].

A key advantage of chatbots lies in their ability to simulate authentic conversational interaction. Using natural language processing (NLP) and machine learning algorithms, educational chatbots can interpret user input and generate contextually appropriate responses, creating a dynamic environment for practising speaking and writing skills. This functionality allows learners to engage in meaningful dialogue without the anxiety often associated with human interaction, fostering greater confidence and fluency in English.

Moreover, chatbots promote a learner-centred approach by offering personalised learning experiences. The system can adapt to the learner's proficiency level, provide tailored responses, and suggest appropriate vocabulary

and grammatical structures. This adaptability ensures that learners receive support tailored to their individual needs, thereby enhancing both motivation and learning efficiency.

Another significant advantage is the immediacy of feedback. Chatbots can instantly identify errors and provide corrections or alternative expressions. This real-time response mechanism allows learners to recognise mistakes and refine their language use without delay, contributing to the development of accuracy and fluency.

In addition, the accessibility of chatbot-based learning tools expands the boundaries of traditional language education. Since chatbots are available anytime and accessible on various devices, learners can practice English beyond the classroom. This flexibility supports autonomous learning and encourages the consistent use of the target language in everyday contexts [3].

Despite these benefits, it is important to highlight certain limitations associated with chatbot use. While chatbots can simulate conversation, they lack the emotional intelligence, cultural sensitivity, and pedagogical judgment of human teachers. As a result, they cannot fully replicate authentic human interaction or address complex communicative nuances. Therefore, their role should be considered supplementary rather than substitutive [4].

In short, chatbots constitute an effective and innovative tool for learning English, offering interactive practice, personalised support, and immediate feedback. However, their integration into the educational process should be balanced with traditional teaching methods to ensure a comprehensive and human-oriented approach to language learning.

The application of Augmented and Virtual Reality in English language teaching represents a significant advancement in educational technology. These technologies are described as innovative tools that create immersive learning environments, enabling students to interact with the target language beyond traditional classroom practices [3].

A central feature of AR and VR in language education is their ability to provide immersive experiences. By simulating real-world contexts, these technologies allow learners to practice English in meaningful situations, thereby bridging the gap between theoretical knowledge and practical communication. Such environments promote active learning, where students engage in exploration, interaction, and problem-solving rather than simply receiving information passively. Moreover, it is necessary to emphasise the strong impact of AR and VR on learner motivation and engagement. Immersive environments capture students' attention and stimulate curiosity, encouraging them to participate more actively in the learning process. This increased engagement contributes to deeper understanding and more effective acquisition of language skills, as learners are more willing to invest time and effort in their studies [5].

In addition to motivational benefits, AR and VR support cognitive development in language learning. The technologies enhance memory, attention, and problem-solving by placing learners in interactive scenarios that require language use in context. As a result, students are able to retain vocabulary and structures more effectively and apply them in practical situations.

Another important aspect is the role of AR and VR in fostering intercultural competence. Virtual reality, for example, can simulate experiences such as visiting historical locations, participating in cultural events, or exploring foreign environments with guided language input. Similarly, augmented reality can provide contextual information about cultural objects, enriching learners' understanding of the target language and its cultural background. These experiences help learners develop a global perspective and a deeper appreciation of cultural diversity.

The use of AR and VR also enables innovative forms of assessment. By creating realistic communicative scenarios, these technologies allow educators to evaluate learners' language proficiency in authentic contexts. This approach

provides a more comprehensive understanding of students' abilities compared to traditional testing methods.

However, implementing AR and VR in English teaching poses several challenges. Technical requirements, such as appropriate hardware and software, and the importance of designing pedagogically sound content, should be emphasised. Issues of accessibility, cost, and digital literacy may limit the widespread adoption of these technologies. Additionally, ethical considerations, including data privacy and the psychological effects of immersive environments, must be carefully addressed [3].

In essence, AR and VR technologies offer substantial potential for transforming English language teaching by providing immersive, interactive, and context-rich learning experiences. While their benefits in terms of engagement, cognitive development, and cultural understanding are significant, their successful integration requires careful planning, appropriate resources, and responsible implementation.

The integration of gamification and serious games into English language teaching represents a significant pedagogical innovation that enhances both the effectiveness and attractiveness of language education. Gamification refers to the incorporation of game design elements – such as points, badges, leaderboards, and challenges – into non-game learning environments in order to stimulate learner motivation and active participation [6].

A fundamental aspect of gamification is its reliance on psychological mechanisms that promote engagement and persistence. By introducing elements of competition, achievement, and reward, gamified learning environments transform traditional educational activities into interactive experiences. This approach supports the development of intrinsic motivation, as learners begin to perceive language learning not as an obligation but as an enjoyable and meaningful process [3].

Serious games, designed for educational rather than entertainment purposes, play a central role in this context. Such games create immersive learning environments where students can practice English in realistic and context-rich scenarios. Through techniques such as interactive storytelling, simulations, and role-playing, learners can apply vocabulary, grammar, and communicative skills in meaningful situations, thereby improving comprehension and retention.

Several types of serious games for learning English can be identified. Vocabulary and grammar games, for instance, incorporate tasks such as multiple-choice exercises, matching activities, and fill-in-the-blank tasks, allowing learners to reinforce linguistic structures through repetition and interaction. These games are often adaptive, adjusting to the learner's proficiency level and providing personalised practice opportunities [3].

The impact of gamification and serious games on student motivation and engagement is particularly significant. Gamified learning environments lead to higher student involvement than traditional instructional methods. The interactive and dynamic nature of games encourages learners to participate more actively, while clearly defined goals and reward systems foster persistence and a sense of achievement.

Moreover, gamification certainly improves not only short-term engagement but also long-term motivation. As learners experience success and progression within game-based environments, they are more likely to continue practising the language consistently. This sustained engagement contributes to deeper learning and better language acquisition outcomes. Additionally, repeated interactions within gamified contexts can reduce language anxiety and increase learner confidence, both crucial factors in effective communication.

Another important dimension is the affective impact of serious games. By incorporating narratives, characters, and immersive scenarios, these games create a positive emotional learning environment. This shift in learners' attitudes from perceiving language learning as difficult to viewing it as enjoyable enhances their

willingness to engage with the language both in and out of the classroom. Furthermore, collaborative and competitive elements in games can foster social interaction, contributing to a sense of community and shared learning experience [3].

However, the importance of aligning game mechanics with educational objectives should be stressed. Without careful pedagogical design, gamification risks prioritising entertainment over learning outcomes. Therefore, educators must ensure that game-based activities are meaningfully integrated into the curriculum and tailored to learners' needs [6].

In brief, gamification and serious games definitely constitute powerful tools in English language teaching, offering immersive, interactive, and motivating learning experiences. Their ability to enhance student engagement, sustain motivation, and improve language proficiency underscores their value as a complement to traditional teaching methods.

Building on the discussion of chatbots, VR/AR, and gamification in English language teaching, it becomes evident that these technologies represent not isolated innovations but interconnected components of a broader AI-driven educational ecosystem. Their combined use illustrates how interactive, immersive, and adaptive tools can enhance learner engagement, autonomy, and language proficiency. At the same time, the ongoing evolution of these technologies points toward new possibilities and challenges that extend beyond current applications. Therefore, it is essential to consider how these advancements will shape the future of AI in English teaching and learning, guiding the development of more sophisticated, inclusive, and human-centred educational practices.

The future of AI in English language teaching and learning is characterised by continuous innovation, increasing sophistication of technologies, and a shift toward highly personalised and immersive educational experiences. AI is expected to further transform traditional pedagogical models by enabling more

adaptive, interactive, and learner-centred approaches that respond dynamically to individual student needs.

One of the most significant directions in the future development of AI is the advancement of adaptive and personalised learning systems. These systems will become more accurate in analysing learner behaviour, predicting learning pathways, and adjusting instructional content in real time. As a result, students will benefit from individualised learning pathways that enhance comprehension, retention, and overall learning outcomes.

In addition, progress in NLP is expected to make AI-driven tools better at understanding and generating language in contextually rich, nuanced ways. This will enable more natural interactions between learners and AI systems, including sophisticated dialogue-based tutors that can simulate authentic communication and respond to learners' linguistic and cognitive needs.

It should also be emphasised that the growing role of immersive technologies, such as AR and VR, is shaping the future of English learning. When integrated with AI, these technologies can create realistic, context-based language environments, enabling learners to engage in meaningful communication and cultural experiences without physical travel. Such developments are expected to significantly enhance learner engagement and motivation.

However, the future of AI in English teaching also presents important challenges. These include the need to improve AI's ability to capture linguistic nuances, such as idiomatic expressions, cultural references, and emotional subtleties. Additionally, ethical concerns, particularly those related to data privacy, will remain central issues. They should certainly be addressed to ensure responsible and equitable use of AI in education [3].

Given these opportunities and challenges, the following key recommendations for educators, researchers, and technologists should be provided.

For educators, it is essential to embrace AI as a supportive tool that enhances teaching and learning processes while maintaining a critical awareness of its limitations. Teachers should be encouraged to engage in continuous professional development to effectively integrate AI into their instructional practices and to adopt student-centred approaches that leverage AI for personalisation and engagement.

For researchers, the focus should be on conducting empirical studies to evaluate the effectiveness of AI-driven educational interventions. By generating evidence-based insights and identifying best practices, researchers can contribute to the informed and responsible implementation of AI technologies in language education.

For technologists, the priority is to design AI systems that are pedagogically sound, user-friendly, and aligned with educational objectives. The importance of user-centred design, data security, and ethical responsibility should be taken into account. Collaboration with educators and researchers is essential to ensure that technological solutions address real educational needs and support meaningful learning experiences.

In conclusion, the future of AI in English teaching and learning holds significant promise for enhancing personalisation, interaction, and accessibility. At the same time, its successful implementation depends on collaborative efforts among educators, researchers, and technologists, as well as a strong commitment to ethical principles and continuous innovation.

References

1. Artificial Intelligence in Higher Education: a practical approach / Prathamesh Churi, Shubham Joshi, Mohamed Elhoseny, Amina Omrane. 1st ed. Boca Raton, FL : CRC Press, 2022. 267 p.

2. Popenici, S. A. D., Kerr, S. Exploring the impact of artificial intelligence on teaching and learning in higher education. *Research and Practice*

in Technology Enhanced Learning. 2017. Vol. 12, No. 1. Art. 22. URL: https://link.springer.com/article/10.1186/s41039-017-0062-8 (access date: 31.03.2026).

3. Macias Loor, M. A., Alcivar Solorzano, D. M., Vera Moreira, A. K. Integration of artificial intelligence in English teaching. 2024. 157 p. DOI: https://doi.org/10.37811/cli_w1046

4. Petrović, J., Jovanović, M. The role of chatbots in foreign language learning: the present situation and the future outlook. *Advanced Technologies, Systems, and Applications V:* proceedings of the International Symposium on Innovative and Interdisciplinary Applications of Advanced Technologies (IAT 2020). Cham: Springer, 2021. P. 313–330. URL: https://link.springer.com/chapter/10.1007/978-3-030-72711-6_17 (access date: 31.03.2026)

5. Huang, X., Zou, D., Cheng, G., Xie, H. A systematic review of AR and VR enhanced language learning. Sustainability. 2021. Vol. 13, No. 9. Art. 4639. DOI: https://doi.org/10.3390/su13094639

6. Zainuddin, Z., Chu, S. K. W., Shujahat, M., Perera, C. J. The impact of gamification on learning and instruction: a systematic review of empirical evidence. *Educational Research Review*. 2020. Vol. 30. Art. 100326. DOI: https://doi.org/10.1016/j.edurev.2020.100326