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THE ROLE OF ARTIFICIAL INTELLIGENCE IN TEACHING FOREIGN LANGUAGES: THEORETICAL FOUNDATIONS AND PRACTICAL APPLICATIONS

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Abstract:
The rapid proliferation of artificial intelligence technologies has fundamentally altered the landscape of higher education, presenting foreign language instructors with unprecedented opportunities to personalise and extend language learning beyond the traditional classroom. This article examines the theoretical underpinnings and practical implications of AI integration in university-level foreign language instruction, drawing on recent scholarly discourse and the experience of a practising language educator. Situated within learner-centred and sociocultural frameworks, the analysis surveys AI-driven applications — ranging from adaptive learning platforms and automated feedback tools to conversational agents and pronunciation coaches — while critically evaluating the pedagogical benefits and systemic challenges they introduce. The article concludes that responsible, pedagogically informed integration of AI holds genuine promise for enhancing student autonomy, motivation, and communicative competence, provided that educators retain their irreplaceable role as designers of meaningful learning experience.

Keywords: Artificial intelligence in education; foreign language teaching; adaptive learning; natural language processing; technology-enhanced language learning; learner autonomy; educational technology ethics.

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1. Introduction

The integration of digital technologies into higher education has been a defining feature of twenty-first century academic life, yet few developments have matched the transformative potential of artificial intelligence. Within a remarkably short timeframe, AI has moved from the periphery of educational discourse to its very centre, informing curriculum design, learner assessment, and classroom practice across disciplines. For foreign language education in particular, this shift carries profound implications: language acquisition is a deeply human, context-sensitive, and socially embedded process, and any technology that aspires to support it must navigate considerable complexity.

As a university instructor who has taught English and Russian as foreign languages for over a decade, the emergence of sophisticated AI tools has not merely supplemented conventional pedagogy; it has invited a fundamental reconsideration of what it means to teach and learn a language. Students increasingly arrive in lecture halls having already interacted with AI-powered language tools on their smartphones, bringing heightened expectations and new assumptions about how language competence is acquired. This article provides a theoretically grounded examination of AI in foreign language education, arguing that it can substantially enhance quality of instruction — but only when teachers retain their fundamental role as architects of meaningful communicative experience.

2. Theoretical Foundations

In education, AI broadly encompasses computational systems capable of processing natural language, recognising patterns in learner behaviour, providing feedback, and adapting instruction in response to individual performance data. Vygotsky's zone of proximal development holds that learning occurs most effectively when learners are challenged slightly above their current competence with appropriate scaffolding — a principle that AI-powered adaptive systems

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operationalise dynamically, offering a degree of individualisation no single teacher can sustain across an entire cohort.

Communicative language teaching (CLT) foregrounds authentic interaction and meaning-making over discrete grammatical accuracy. AI conversational agents extend communicative practice beyond contact hours, addressing Krashen's input hypothesis: the need for comprehensible, contextualised language exposure. Swain's output hypothesis holds that producing language is integral to acquisition; AI writing assistants and speech recognition systems provide immediate, low-stakes opportunities to generate output and receive corrective feedback. Learner-centred pedagogy further emphasises student agency and metacognitive awareness — goals AI supports by enabling self-paced study and progress monitoring through data-rich dashboards.

3. Applications of AI in Foreign Language Teaching

The most pedagogically significant contribution of AI lies in personalising instruction at scale. Platforms such as Duolingo deploy machine learning algorithms to determine optimal review intervals — grounded in spaced repetition — and calibrate exercise difficulty to individual learner profiles. University programmes are increasingly adopting adaptive systems that generate granular learner analytics, enabling instructors to identify persistent difficulties and allocate contact time more efficiently.

AI writing assistants such as Grammarly, and more recently large language model-based tools, offer learners immediate, contextualised commentary on grammar, vocabulary, coherence, and style. Research published between 2023 and 2025 indicates teacherthat learners engaging regularly with AI writing feedback demonstrate measurable improvements in grammatical accuracy and lexical range, provided they engage critically rather than accepting corrections passively.

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Pronunciation instruction has historically been underserved in foreign language pedagogy. AI-powered speech recognition identifies phonemic errors and provides targeted drilling consistently across an entire cohort. Conversational AI agents offer extended, low-stakes speaking practice in authentic-seeming dialogic contexts — a psychologically safe environment for learners who experience speaking anxiety. AI-enhanced reading platforms additionally gloss unfamiliar vocabulary in context, track word encounters across texts, and schedule review via spaced repetition with a precision no manual system can achieve.

4. Benefits of AI for Students and Teachers

The most consistently reported benefit for students is enhanced accessibility: AI tools remove temporal and spatial constraints on language practice, enabling learners across diverse geographic, socioeconomic, and physical circumstances to access high-quality experiences. Research published in 2024 indicates learners using AI-enhanced platforms report higher self-efficacy and intrinsic motivation than those relying on conventional materials — attributable to immediacy of feedback, learning analytics, and the removal of social anxiety around making errors in front of peers.

For teachers, AI offers meaningful relief from labour-intensive but low-cognitive tasks: marking grammar exercises, tracking attendance, generating differentiated materials. This redistribution of cognitive load enables instructors to invest professional attention in what AI cannot replicate: facilitating genuine communicative interaction, providing culturally nuanced discourse commentary, and mentoring learners in academic writing. The critical point is that AI is a pedagogical tool, not a pedagogical agent — it augments; it does not replace.

5. Challenges and Ethical Considerations

The most pressing concern is academic integrity. LLM-based tools can generate fluent, accurate text in virtually any language, destabilising traditional written

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assessment. A student who submits AI-generated prose in the target language has neither practised the writing process nor demonstrated communicative competence. Responses must be pedagogical as much as policing — instructors need to redesign assessments emphasising process, reflection, and in-person communication rather than written products AI can convincingly simulate.

Algorithmic bias presents a further challenge: language models trained predominantly on high-resource language data may perform poorly for learners of minority languages, with direct equity implications for diverse cohorts. Data privacy raises questions about storage, ownership, and secondary use of learner data that institutional governance frameworks are still catching up with. Digital inequality remains under-discussed: access to reliable internet and current-generation devices is far from universal, and enthusiasm for AI-enhanced learning in well-resourced contexts can obscure this reality.

6. Future Perspectives

Looking ahead to 2026–2030, multimodal AI systems — capable of processing text, speech, image, and video simultaneously — will enable more holistic simulations of communicative contexts, moving language practice closer to the complexity of real-world interaction. Immersive environments integrating augmented and virtual reality with AI-driven interaction represent a promising frontier for situating language practice in authentic cultural contexts without physical travel.

Assessment methodology is likely to undergo substantial transformation: competency-based, portfolio-oriented, and process-focused designs are better suited to an AI-augmented world than product-based examinations. The development of AI literacy as a component of language teacher education is an urgent priority. Pre-service and in-service programmes must equip instructors with tools to evaluate AI applications critically, practical integration skills, and ethical frameworks to navigate the dilemmas they introduce. An AI-literate

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teaching profession is the most reliable safeguard against technological determinism.

7. Conclusion

The role of artificial intelligence in teaching foreign languages to university students is neither marginal nor uncomplicated. AI technologies, when grounded in sound pedagogical theory and deployed with critical awareness of their limitations, offer genuine benefits: personalised practice, immediate feedback, extended communicative opportunity, and enhanced accessibility. At the same time, challenges posed by academic integrity concerns, algorithmic bias, data privacy, and digital inequality demand rigorous and ongoing attention.

The central lesson is that technology amplifies pedagogical intention: thoughtfully designed AI-enhanced environments can produce richer, more autonomous, and more equitable language education, but poorly designed ones reduce language learning to a mechanical and shallow process. The difference lies not in the sophistication of the tools but in the quality of the educational vision they serve. The most important question is not what AI can do for language education, but what language educators, informed by theory, experience, and ethical responsibility, choose to do with AI.

References

1. Baskara, R., & Mukarto, F. (2023). Exploring the implications of AI-assisted language learning in higher education. Indonesian Journal of Applied Linguistics, 13(1), 99–112.

2. Chen, X., Zou, D., Xie, H., Cheng, G., & Liu, C. (2023). Two decades of artificial intelligence in education. Educational Technology & Society, 26(1), 28–47.

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3. Crompton, H., & Burke, D. (2023). Artificial intelligence in higher education: The state of the field. International Journal of Educational Technology in Higher Education, 20, 22.
4. Godwin-Jones, R. (2023). Spectre and spirit: Generative AI and language learning today and tomorrow. Language Learning & Technology, 27(2), 1–18.
5. Huang, X., Zou, D., Cheng, G., Chen, X., & Xie, H. (2023). Trends and applications of AI in language education. Educational Technology & Society, 26(1), 112–131.
6. Kohnke, L., Moorhouse, B. L., & Zou, D. (2023). Exploring generative AI in language teaching. RELC Journal, 54(2), 214–228.
7. Lee, I., & Zheng, B. (2024). AI-mediated feedback in L2 writing: Opportunities and implications. Journal of Second Language Writing, 63, 101071.
8. Miao, F., & Holmes, W. (2023). Guidance for generative AI in education and research. UNESCO Publishing.
9. Moorhouse, B. L., Yeo, M. A., & Wan, Y. (2023). Generative AI tools and assessment guidelines. Computers and Education Open, 5, 100151.
10. Rao, N. J. (2024). Large language models and the future of language education. Asian Journal of Education and Social Studies, 50(4), 12–24.
11. Shadiev, R., & Wang, X. (2023). Technology-assisted language learning in authentic contexts. Frontiers in Psychology, 14, 1049964.
12. Tai, T.-Y., & Chen, H. H.-J. (2023). ChatGPT-assisted language learning: Student perceptions. Interactive Learning Environments, 32(9), 1–18.
13. Zawacki-Richter, O., Marín, V. I., Bond, M., & Gouverneur, F. (2024). Systematic review of AI applications in higher education. International Journal of Educational Technology in Higher Education, 21, 1.
14. Zhang, R., & Zou, D. (2023). Self-regulated language learning with technology: A meta-analysis. System, 118, 103131.

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https://eurekaoa.com/index.php/10

15. Zheng, L., & Bhagat, K. K. (2023). Effectiveness of AI-based adaptive learning for foreign language proficiency. Education and Information Technologies, 28(12), 15451–15471.

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