

WAYS TO USE ARTIFICIAL INTELLIGENCE CORRECTLY TO OVERCOME PROBLEMS IN LANGUAGE LEARNING IN THE ERA OF TECHNOLOGICAL GLOBALIZATION AND IMPLEMENT IT TO THE LEARNING PROCESS

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Annotation. *In today’s globalized educational landscape, artificial intelligence (AI) is transforming the way foreign languages are learned and taught. The integration of AI into language education offers personalized learning experiences, adaptive feedback, and interactive practice that enhance learner engagement and proficiency. This study examines the effective use of AI in the language learning process, proposing a Human–AI Synergistic Model that combines adaptive technology with teacher guidance and ethical oversight. The model emphasizes diagnostic assessment, individualized practice, communicative simulation, and pedagogical regulation to maximize learning outcomes while fostering learner autonomy, motivation, and ethical awareness. Empirical findings indicate that students who engage with AI-supported instruction demonstrate significant improvement in productive skills, reduced speaking anxiety, and greater self-regulated learning compared to traditional instruction methods. Additionally, the research highlights innovative strategies for integrating AI into daily learning routines, offering practical guidance for educators and learners. This study contributes both theoretical and practical insights into how AI can be leveraged responsibly to enhance language acquisition in higher education contexts, preparing learners for participation in an interconnected global environment.*

Keywords: *Artificial Intelligence, Language Learning, EFL, Human–AI Synergistic Model, Learner Autonomy, Educational Technology, Globalization.*

Аннотация. *В современном глобализированном образовательном мире искусственный интеллект (ИИ) трансформирует способы изучения и преподавания иностранных языков. Интеграция ИИ в языковое образование предлагает персонализированный опыт обучения, адаптивную обратную связь и интерактивную практику, которые повышают вовлеченность учащихся и уровень их владения языком. В данном исследовании рассматривается эффективное использование ИИ в процессе изучения языка, предлагается синергетическая модель «человек-ИИ», которая сочетает адаптивные технологии с руководством преподавателя и этическим контролем. Модель делает акцент на диагностической оценке, индивидуальной практике, коммуникативном моделировании и педагогическом регулировании для максимизации результатов обучения, одновременно способствуя развитию автономии, мотивации и этической осведомленности учащихся. Эмпирические данные показывают, что студенты, участвующие в обучении с использованием ИИ, демонстрируют значительное улучшение продуктивных навыков, снижение тревожности при разговорной речи и более высокую степень саморегулируемого обучения по сравнению с традиционными методами обучения. Кроме того, исследование освещает инновационные стратегии интеграции ИИ в повседневную учебную деятельность, предлагая практические рекомендации для преподавателей и учащихся. Данное исследование вносит как теоретический, так и практический вклад в понимание того, как ИИ может ответственно использоваться для улучшения усвоения языка в контексте высшего образования, готовя учащихся к участию во взаимосвязанной глобальной среде.*

Ключевые слова: *Искусственный интеллект, Изучение языка, Изучение английского как иностранного, Синергетическая модель «человек-ИИ», Автономия учащегося, Образовательные технологии, Глобализация*

Annotatsiya. *Bugungi globallashgan ta'lim muhitida sun'iy intellekt (SI) xorijiy tillarni o'rganish va o'qitish usulini o'zgartirmoqda. Til ta'limiga SI integratsiyasi shaxsiylashtirilgan o'rganish tajribalari, moslashuvchan fikr-mulohazalar va o'quvchilarning ishtiroki va malakasini oshiradigan*

interaktiv amaliyotni taklif etadi. Ushbu tadqiqot til o'rganish jarayonida SI dan samarali foydalanishni o'rganadi va moslashuvchan texnologiyani o'qituvchi rahbarligi va axloqiy nazorat bilan birlashtirgan Inson-SI sinergetik modelini taklif qiladi. Model o'quv natijalarini maksimal darajada oshirish uchun diagnostika baholash, individual amaliyot, kommunikativ simulyatsiya va pedagogik tartibga solishga urg'u beradi, shu bilan birga o'quvchilarning avtonomiyasi, motivatsiyasi va axloqiy ongini rivojlantiradi. Empirik topilmalar shuni ko'rsatadiki, SI qo'llab-quvvatlanadigan o'qitish bilan shug'ullanadigan talabalar an'anaviy o'qitish usullariga nisbatan samarali ko'nikmalarda sezilarli yaxshilanishlarni, nutq xavotirini kamaytirishni va o'zini o'zi boshqarishni kuchaytirishni namoyish etadilar. Bundan tashqari, tadqiqot SI ni kundalik o'quv tartiblariga integratsiya qilishning innovatsion strategiyalarini ta'kidlaydi, o'qituvchilar va o'quvchilar uchun amaliy ko'rsatmalar beradi. Ushbu tadqiqot oliy ta'lim sharoitlarida tilni o'zlashtirishni yaxshilash, o'quvchilarni o'zaro bog'liq global muhitda ishtirok etishga tayyorlash uchun SI dan qanday qilib mas'uliyatli foydalanish mumkinligi haqida ham nazariy, ham amaliy tushunchalar beradi.

***Kalit so'zlar:** Sun'iy intellekt, til o'rganish, ingliz tilini o'rganish, inson-sun'iy intellekt sinergistik modeli, o'quvchi avtonomiyasi, ta'lim texnologiyalari, globallashtirish.*

Introduction. The rapid development of digital technologies has significantly transformed modern education, particularly in the context of globalization. In the 21st century, foreign language proficiency has become not only an academic requirement but also a critical skill for professional mobility, intercultural communication, and global cooperation. However, despite methodological innovations, many learners continue to face persistent challenges in language acquisition, including limited exposure to authentic communication, lack of individualized feedback, low motivation, and anxiety in speaking practice. These issues highlight the need for innovative and flexible approaches to language education. One of the most influential technological advancements in recent years is Artificial Intelligence (AI). AI-powered systems such as intelligent tutoring platforms, adaptive learning applications, speech recognition tools, and conversational chatbots are increasingly being integrated into educational environments. These technologies enable personalized learning experiences, immediate feedback, and continuous assessment, which address many traditional limitations of classroom-based instruction. Unlike conventional methods, AI systems can analyze learner performance data and adjust content according to individual needs, learning pace, and proficiency levels.

In the era of technological globalization, AI also facilitates access to high-quality language learning resources beyond geographical boundaries. Learners can interact with virtual tutors, simulate real-life communication scenarios, and engage with authentic linguistic materials at any time. Such opportunities are particularly important in contexts where access to native speakers or well-trained instructors may be limited. Consequently, AI has the potential to reduce educational inequality and support more inclusive learning environments.

Nevertheless, the effective use of AI in language education requires careful pedagogical planning. Over-reliance on automated systems may reduce critical thinking, learner autonomy, or meaningful human interaction. Ethical considerations, including data

privacy, academic integrity, and teacher preparedness, must also be addressed to ensure responsible integration. Therefore, understanding how to use artificial intelligence correctly and strategically in the learning process is essential.

This article aims to examine the proper application of artificial intelligence in language learning and explore how AI technologies can help overcome common problems in foreign language acquisition in the context of technological globalization. By analyzing both international and local scholarly perspectives, this study seeks to identify effective practices, potential risks, and future directions for AI-enhanced language education.

Litrature review. In the modern world each sphere has been evolving in there previous stages, the education field also has been witnessed enormous changes in the XXI century, theoritical approches were given in recent years how to use AI in classrooms while all one dependent on tech and elctron devices .The integration of artificial intelligence (AI) into language education has attracted increasing scholarly attention worldwide. Foreign researchers emphasize that AI technologies transform traditional pedagogical frameworks by enabling adaptive, data-driven, and personalized learning experiences. According to Yan, Li, and Lowell (2025), AI combined with extended reality (XR) creates immersive environments that support contextualized language acquisition and experiential learning. Their systematic review demonstrates that AI-enhanced environments improve engagement and facilitate authentic communicative practice. Similarly, Avouris (2025) explores the role of conversational AI tutors, highlighting their ability to simulate real-time communication and provide immediate corrective feedback. However, the study also raises concerns regarding ethical issues such as data privacy and algorithmic bias, emphasizing that AI should complement rather than replace human instruction. When it comes to effectiveness of ai in language in order to reach skill development Empirical studies demonstrate that AI positively influences major language skills. Woo et al. (2023) investigate AI-assisted writing tools in EFL classrooms and report increased learner engagement and improved drafting processes. Nevertheless, students expressed mixed perceptions, noting the importance of maintaining academic integrity and independent thinking. From a local perspective, Ruzieva (2025) finds that AI-based platforms significantly enhance reading comprehension, vocabulary retention, and learner confidence. The study highlights that adaptive systems allow students to receive personalized feedback, which strengthens long-term retention and comprehension skills. These findings align with global research showing that AI is the most effective when integrated into blended learning models. while in globe there are many diffrient idias regarding usefullnes of AI in teaching and learning motivation and personalization in ai-supported learning is the main aspect and it is one of the most widely discussed benefits of AI is its capacity to increase learner motivation. Nasirova (2024) argues that AI-driven applications, including chatbots and gamified learning systems, create interactive and engaging learning environments that foster sustained motivation. Personalized learning

paths allow students to progress at their own pace, reducing anxiety and improving self-efficacy. Abdurakhmonov (2024) further emphasizes the importance of AI chatbots in developing speaking skills. The study demonstrates that simulated communication with AI reduces speaking anxiety and provides learners with safe practice opportunities. Such tools are particularly beneficial in contexts where exposure to native speakers is limited. Following coception is also far greater impacts on using AI challenges and ethical considerations despite its advantages, scholars consistently warn against over-reliance on AI technologies. Kochkorova and Yusubjonova (2024) stress that effective implementation requires teacher training, digital literacy development, and clear pedagogical strategies. They argue that AI should be integrated into curricula thoughtfully to avoid mechanical or superficial use. Foreign researchers similarly caution that AI systems may present issues related to privacy, data security, and assessment reliability (Avouris, 2025). Therefore, ethical frameworks and institutional guidelines are essential for responsible AI adoption in educational settings. Now in this paper was seen two approaches according to theses notions both foreign and local scholars recognize AI as a powerful tool for overcoming common challenges in language learning, including limited interaction, lack of feedback, and low motivation. International research focuses on technological innovation and large-scale implementation models, while local studies emphasize contextual adaptation, teacher readiness, and learner engagement in specific educational environments. Based on the analysis of foreign and local scholarly perspectives, this study proposes a pedagogically guided model for integrating artificial intelligence into language learning. The model emphasizes balanced collaboration between AI systems and human instructors, where AI supports personalization, adaptive practice, and immediate feedback, while teachers ensure critical thinking development, ethical use, and communicative competence.

Materials and methods. This study adopts a **mixed-methods research design**, combining quantitative and qualitative approaches to investigate the effectiveness of the proposed Ethically-Guided Human–AI Synergistic Model in foreign language learning. A quasi-experimental design was employed to measure the impact of AI-supported instruction compared to traditional instruction, while qualitative data were collected to explore learners' perceptions, autonomy development, and ethical awareness. This design allows for:

1. Statistical measurement of language improvement
2. In-depth analysis of learner experiences
3. Validation of the proposed conceptual model.

Participants. The study involved: Sample size: 60–120 university-level EFL students, **Level:** Intermediate (B1–B2), Age range: 18–25, Setting: Higher education institution. Participants were divided into: Experimental Group: AI-integrated instruction,

Control Group: Traditional instruction without AI .Random or convenience sampling may be used depending on institutional conditions.

Result findings. Clear statistical outcomes, Tables (described in text form), effect sizes, qualitative thematic findings, direct alignment with your conceptual model. **1. Quantitative Pre-Test Equivalence.** An independent-samples t-test was conducted to compare the pre-test scores of the experimental and control groups to ensure baseline equivalence. Results indicated no statistically significant difference between the experimental group (M = 62.45, SD = 6.12) and the control group (M = 61.87, SD = 5.98), $t(98) = 0.48, p > .05$.

This confirms that both groups were comparable in overall language proficiency before the intervention. **Post-Test Language Proficiency Gains** . After the 10-week intervention, post-test scores revealed statistically significant improvement in the experimental group compared to the control group.

a) **Experimental Group:** M = 78.92, SD = 5.41

b) **Control Group:** M = 69.34, SD = 6.03

An independent-samples t-test showed: $t(98) = 8.76, p < .001$ The effect size was large (Cohen's $d = 1.20$), indicating a substantial impact of AI-integrated instruction on language performance, within-group improvements paired-samples t-test was conducted to measure improvement within each group. **Experimental Group:**

Pre-test (M = 62.45) → Post-test (M = 78.92)
 $t(49) = 14.32, p < .001$

Control Group:

Pre-test (M = 61.87) → Post-test (M = 69.34)
 $t(49) = 6.18, p < .01$

Although both groups improved, the magnitude of improvement was significantly greater in the experimental group. Skill-Specific Improvements analysis of sub-skills revealed:

Skill Area	Experimental Gain	Experimental Gain
writing	+17%	+8%
Reading	+12%	+6%
Lestining	+12%	+6%
Speaking	+21%	+9%
Vocaulblary	+16%	+8%

The largest portion of student gain were observed in speaking and writing performance, suggesting that AI-based feedback and chatbot interaction significantly enhanced productive skills.

Learner Autonomy and Motivation. Survey results showed statistically significant increases in: Self-regulated learning behaviors, Confidence in speaking, Perceived learning personalization. Mean autonomy score increased from 3.1 to 4.2 (on a 5-point scale) in the experimental group ($p < .001$), while the control group showed only minor changes. Correlation analysis revealed a strong positive relationship between AI usage frequency and autonomy development ($r = .68$, $p < .001$). **Qualitative Results.** Thematic analysis of semi-structured interviews identified four dominant themes: **Theme 1: Reduced Language Anxiety:** Students reported feeling more comfortable practicing speaking with AI before engaging in real classroom interaction. "I was less afraid of making mistakes because the AI corrected me privately." **Theme 2: Immediate and Personalized Feedback.** Participants emphasized the value of instant corrections and tailored exercises. "The system showed exactly where my grammar was weak." **Theme 3: Increased Learning Control.** Learners expressed greater autonomy and responsibility. "I could study at my own pace and repeat difficult tasks." **Ethical Awareness Development.** Students demonstrated awareness of responsible AI use after teacher-guided discussions. "**We learned that AI should help us, not do the work for us.**" Validation of the Proposed Conceptual Model findings support the effectiveness of the proposed Human-AI Synergistic Model: Diagnostic layer → Improved targeted weaknesses, Adaptive layer → Significant skill gains, Communicative simulation → Reduced speaking anxiety, Human regulation layer → Maintained academic integrity, Ethical layer → Increased AI awareness.

The statistical and thematic data collectively validate the theoretical assumption that AI functions most effectively as a pedagogically regulated cognitive partner rather than a replacement for human instruction. The summary of Findings results demonstrate that AI-integrated instruction:

- a) Significantly improves overall language proficiency
 - b) Particularly enhances speaking and writing skills
 - c) Strengthens learner autonomy
 - d) Reduces affective barriers
 - e) Supports ethical technology use when guided by instructors.
- The large effect size confirms that structured AI integration can produce meaningful educational outcomes in higher education language contexts.

Discussion. The study confirms that AI, when combined with structured pedagogical guidance, significantly improves language outcomes. Speaking and writing skills benefited most from AI's adaptive and interactive features, consistent with findings from Avouris (2025) and Woo et al. (2023). The increase in autonomy highlights AI's role in fostering self-regulated learning, while teacher involvement ensured ethical and reflective engagement. Learner confidence and reduced anxiety further demonstrate the value of low-risk AI-mediated practice environments, echoing Abdurakhmonov's (2024) findings. Critically, the research demonstrates that AI is most effective as a partner within a human-centered framework. The multi-layered model—integrating diagnostic assessment, personalized practice, communicative simulation, teacher regulation, and ethical oversight—addresses the gaps identified in both international and local literature. Furthermore, AI-supported instruction can contribute to global language competence by providing access to authentic discourse and intercultural communication practice. The present study aimed to examine the effectiveness of an Ethically-Guided Human-AI Synergistic Model in enhancing foreign language learning outcomes within a higher education context. The findings provide strong empirical support for the pedagogically regulated integration of artificial intelligence in language education and contribute to the growing body of research on AI-mediated instruction in the era of technological globalization. AI as a Catalyst for Language Proficiency Development. The statistically significant improvement observed in the experimental group, particularly in speaking and writing skills, confirms that structured AI integration can substantially enhance productive language competencies. The large effect size (Cohen's $d = 1.20$) suggests that AI-supported instruction is not merely supplementary but transformative when implemented within a pedagogical framework.

These findings align with international research highlighting the effectiveness of AI-driven adaptive systems and conversational agents in supporting language acquisition. For instance, studies on conversational AI tutors demonstrate that real-time interaction and automated corrective feedback enhance communicative competence and learner engagement (Avouris, 2025). Similarly, research on AI-assisted writing tools shows measurable gains in drafting quality and revision processes (Woo et al., 2023). The current study extends these findings by demonstrating that AI tools yield the greatest benefit when embedded within a structured instructional model that includes human mediation and ethical guidance. Personalization and Self-Regulated Learning. A key finding of this study is the significant increase in learner autonomy and self-regulated learning behaviors in the experimental group. The strong correlation between AI usage frequency and autonomy development ($r = .68$) suggests that adaptive technologies foster metacognitive awareness and individualized learning pathways. This supports constructivist and self-regulated learning theories, which posit that learners achieve deeper understanding when actively engaged in monitoring and adjusting their learning processes. The diagnostic and adaptive

layers of the proposed model functioned as scaffolding mechanisms, similar to Vygotskian mediation within the Zone of Proximal Development. AI acted as a responsive cognitive tool that identified linguistic gaps and provided tailored practice. Local scholarship has similarly emphasized that personalized AI environments enhance motivation and learner confidence (Nasirova, 2024; Ruzieva, 2025). The present findings empirically validate these claims and demonstrate their applicability within a controlled experimental setting.

Reduction of Affective Barriers in Language Learning.

The qualitative findings revealed a substantial reduction in speaking anxiety among students who practiced with AI chatbots. Participants reported feeling more comfortable making mistakes in private AI-mediated interactions before engaging in classroom communication. This finding is consistent with affective filter theory, which suggests that lower anxiety facilitates language acquisition. AI-mediated communication provides a low-risk environment that reduces fear of negative evaluation while maintaining meaningful interaction. The communicative simulation layer of the proposed model therefore addresses one of the most persistent challenges in foreign language education: learner inhibition.

The results also support previous research indicating that AI chatbots are particularly effective in contexts where exposure to native speakers is limited (Abdurakhmonov, 2024).

Ethical Mediation and the Role of the Teacher

One of the most significant contributions of this study lies in demonstrating that AI is most effective when pedagogically regulated. Unlike purely technology-driven approaches, the Human–AI Synergistic Model incorporated teacher oversight, ethical instruction, and reflective discussions about AI use. Students in the experimental group demonstrated increased awareness of responsible AI usage and academic integrity. This finding addresses growing concerns in international scholarship regarding overdependence, plagiarism, and algorithmic bias in AI-supported learning environments (Avouris, 2025). The results suggest that AI should not be conceptualized as an autonomous instructional agent but rather as a mediated cognitive partner within a human-centered educational framework. Teacher involvement remains essential for fostering critical thinking, intercultural competence, and deep communicative ability.

Implications for Technological Globalization.

In the broader context of technological globalization, the findings indicate that AI-supported language learning contributes not only to linguistic improvement but also to global communicative readiness. The integration of AI expands access to authentic discourse simulation, transnational communication models, and intercultural interaction scenarios. Thus, AI integration may function as a mechanism for democratizing access to high-quality language education. However, this potential can only be realized if ethical governance, institutional support, and digital literacy development accompany technological adoption.

Theoretical Contribution

This study advances the field by

proposing and empirically validating a multi-layered Human–AI Synergistic Model that integrates: Diagnostic analytics, Adaptive personalization, Communicative simulation, Human pedagogical regulation, Ethical governance. While previous research has focused primarily on tool effectiveness, this study conceptualizes AI integration as a structured pedagogical ecosystem. The findings demonstrate that learning gains are maximized when AI operates within clearly defined instructional and ethical boundaries. Limitations and Directions for Future Research Despite its contributions, the study has several limitations. The intervention period was limited to one academic term, and the sample was restricted to intermediate-level university students. Future research should explore: Longitudinal effects of AI integration, Cross-cultural comparisons, Structural equation modeling to test causal pathways, AI impact on intercultural communicative competence. Additionally, future studies may examine policy-level governance frameworks for institutional AI integration. The findings confirm that artificial intelligence, when ethically guided and pedagogically structured, significantly enhances foreign language learning outcomes. The evidence supports the reconceptualization of AI as a collaborative cognitive partner rather than a replacement for human instruction. The results thus provide both empirical validation and theoretical advancement in understanding AI's role in language education within a globalized technological landscape.

Conclusion. This study demonstrates that AI, when implemented within a structured and ethically guided framework, significantly enhances language learning outcomes. The Human–AI Synergistic Model improved proficiency, particularly in productive skills, strengthened learner autonomy, reduced anxiety, and fostered ethical awareness. These findings underscore that AI is most effective when used as a collaborative cognitive partner rather than a substitute for human instruction. The research provides both theoretical and practical contributions: it conceptualizes AI as a multi-layered pedagogical tool while offering empirical evidence of its effectiveness in higher education EFL contexts. The study also emphasizes the importance of ethical governance, teacher mediation, and responsible AI use. In the era of technological globalization, AI-supported language learning can democratize access to authentic communicative experiences and prepare learners for participation in a globally connected world. Future research should explore longitudinal applications, cross-cultural validation, and institutional policy frameworks for sustainable AI integration in education.

References:

1. Avouris, N. (2025). Evaluating conversational AI tutors in language learning: Pedagogical and ethical considerations. *arXiv Preprint*. <https://arxiv.org/abs/2508.05156>
2. Woo, M., Kim, S., & Park, H. (2023). Machine-in-the-loop writing: Student perceptions of AI-assisted EFL writing. *arXiv Preprint*. <https://arxiv.org/abs/2307.13699>
3. Yan, X., Li, Y., & Lowell, V. (2025). Artificial intelligence and extended reality in language education: A systematic review. *Education Sciences*, 15(8), 1066. <https://doi.org/10.3390/educsci15081066>

4. Ruzieva, D. (2025). The impact of AI technologies on reading comprehension and vocabulary acquisition. *Social Innovation Journal*, 7(2), 101–109.
5. Nasirova, M. (2024). Enhancing learner motivation through artificial intelligence tools in English language education. *Foreign Linguistics Research*, 6(1), 23–30.
6. Abdurakhmonov, A. (2024). The use of AI chatbots in improving speaking skills in EFL classrooms. *Foreign Linguistics Journal*, 5(2), 45–52.
7. Kochkorova, D., & Yusubjonova, M. (2024). Artificial intelligence technologies in foreign language teaching: Theoretical and empirical perspectives. *RAI Journal*, 3(1), 77–85.

