



ARTIFICIAL INTELLIGENCE IN ENGLISH LINGUISTICS: INNOVATIONS, CHALLENGES, AND METHODOLOGICAL PERSPECTIVES

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Abstract (in English)

The rapid advancement of artificial intelligence (AI) has significantly transformed linguistics and language education. This article explores the integration of AI technologies into English linguistics and language teaching, focusing on their methodological, pedagogical, and ethical implications. It examines AI tools such as natural language processing, automated assessment, adaptive learning systems, and machine translation, analyzing their impact on linguistic research and language learning outcomes. The study concludes that AI integration enhances language acquisition efficiency, supports digital literacy, and fosters innovative approaches in modern linguistics.

Keywords: *Artificial Intelligence, Linguistics, English Language Teaching, Digital Education, Methodology.*

Annotatsiya (O'zbek tilida)

Sun'iy intellekt (SI) texnologiyalarining tez rivojlanishi lingvistika va til ta'limi tizimida katta o'zgarishlarga olib keldi. Ushbu maqolada ingliz tilshunosligi va uni o'qitish jarayonida SI vositalarining integratsiyasi, metodik, pedagogik va axloqiy jihatlarini tahlil qilinadi. Tabiiy tilni qayta ishlash, avtomatik baholash, moslashuvchan ta'lim tizimlari va mashina tarjimai kabi SI texnologiyalari lingvistik tadqiqotlar va til o'rganish natijalariga qanday ta'sir qilishini o'rganadi. Natijalar shuni ko'rsatadiki, SI integratsiyasi o'quv samaradorligini oshiradi, raqamli savodxonlikni rivojlantiradi va zamonaviy tilshunoslikda innovatsion yondashuvlarni rag'batlantiradi.



Kalit so‘zlar: *sun’iy intellekt, lingvistika, ingliz tili o‘qitish, raqamli ta’lim, metodika.*

Аннотация (на русском языке)

Бурное развитие технологий искусственного интеллекта (ИИ) значительно изменило лингвистику и систему преподавания языков. В данной статье рассматривается интеграция технологий ИИ в английскую лингвистику и обучение языку, с акцентом на методические, педагогические и этические аспекты. Рассматриваются инструменты ИИ, такие как обработка естественного языка, автоматическая оценка, адаптивные системы обучения и машинный перевод, и их влияние на лингвистические исследования и результаты обучения. Исследование показывает, что интеграция ИИ повышает эффективность освоения языка, способствует развитию цифровой грамотности и стимулирует инновационные подходы в современной лингвистике.

Ключевые слова: *искусственный интеллект, лингвистика, преподавание английского языка, цифровое образование, методика.*

Introduction

The rapid development of digital technologies has transformed the landscape of modern linguistics and language education. Artificial intelligence (AI) now plays a central role in language research and teaching, offering innovative tools for analyzing linguistic structures, semantics, discourse patterns, and phonetics. In English language teaching (ELT), AI has facilitated adaptive learning, automated assessment, and personalized pedagogical strategies that were previously unattainable through traditional methods. This article aims to explore how AI integration impacts English linguistics, the methodology of language teaching, and the ethical considerations associated with these technologies.

1. AI in Linguistic Research

Natural Language Processing (NLP) has enabled linguists to process and analyze vast amounts of text data efficiently. AI tools assist in semantic analysis, syntactic parsing, corpus linguistics, and discourse analysis, providing insights into



language patterns that were previously inaccessible. For example, AI can identify frequency trends, detect shifts in meaning, and model language evolution over time. In English linguistics, NLP applications have been applied to sentiment analysis, sociolinguistic studies, and computational pragmatics, significantly enhancing research capacity and depth.

2. AI in English Language Teaching

AI technologies have revolutionized ELT by introducing intelligent tutoring systems, chatbots, adaptive exercises, and automated feedback. Chatbots simulate authentic conversational contexts, enabling learners to practice fluency and receive immediate corrections. Automated writing evaluation tools help students improve grammar, vocabulary, and coherence. Furthermore, gamified platforms like Duolingo and AI-assisted grammar checkers motivate learners while fostering independent study skills.

3. AI in Assessment and Evaluation

Assessment is a critical component of language acquisition, and AI provides opportunities for dynamic and personalized evaluation. Machine learning algorithms can assess writing quality, pronunciation accuracy, and listening comprehension. AI-driven analytics track learner progress over time, identify areas for improvement, and recommend individualized exercises, thereby enhancing both formative and summative assessment practices.

4. Ethical and Methodological Considerations

While AI offers significant benefits, ethical and methodological challenges must be addressed. Data privacy, algorithmic bias, and over-reliance on technology are key concerns. Educators must ensure that AI complements rather than replaces human instruction, maintaining the importance of teacher guidance, cultural context, and critical thinking in language learning.

5. Future Perspectives and Innovations

The future of AI in linguistics and language education is promising. Emerging technologies, including multimodal AI, speech synthesis, and intelligent virtual environments, offer further potential for innovative language teaching.



Localized AI tools for Uzbek learners of English could facilitate global access to English education, while interdisciplinary collaborations between linguists, educators, and technologists will ensure ethical and effective AI integration.

Conclusion

Artificial intelligence is redefining modern linguistics and language education. Integrating AI into English linguistics and teaching supports innovative pedagogy, efficient assessment, and enhanced learner engagement. By combining technological advances with traditional linguistic expertise, educators can provide learners with a holistic and modern approach to language acquisition.

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