

## HARNESSING ARTIFICIAL INTELLIGENCE IN ENGLISH AND UZBEK LANGUAGE TEACHING IN THE ERA OF DIGITAL TRANSFORMATION

Khujaev Dilshod Gayratovich.

[dilshodislombek@gmail.com](mailto:dilshodislombek@gmail.com).

Intern-teacher of general linguistic department  
of Uzbekistan state world languages university.

**Abstract.** As digitalization reshapes education worldwide, artificial intelligence (AI) is increasingly influencing how languages are taught and acquired. This article examines the integration of AI in teaching both English and Uzbek, highlighting how emerging technologies are enhancing instructional effectiveness, learner engagement, and accessibility. While English benefits from decades of technological integration, Uzbek is gradually embracing AI-driven language tools. By analyzing current trends, linguistic challenges, and the role of computational linguistics, this paper underscores the significance of AI in modern bilingual language instruction.

**Keywords:** Artificial intelligence, English language teaching, Uzbek language instruction, computational linguistics, digital transformation, language education technologies, bilingual learning, NLP.

## RAQAMLASHTIRISH DAVRIDA SUN'IY INTELLEKTNI INGILIZ VA O'ZBEK TILLARINI O'QITISHDA FOYDALANISH

Xo'jayev Dilshod G'ayratovich

[dilshodislombek@gmail.com](mailto:dilshodislombek@gmail.com)

O'zbekiston davlat jahon tillari universiteti umumiy tilshunoslik kafedrasining  
stajer- o'qituvchisi

**Annotatsiya.** Raqamlashtirish butun dunyo bo'ylab ta'lim tizimini tubdan o'zgartirar ekan, sun'iy intellekt (SI) tillarni o'qitish va o'zlashtirish jarayoniga tobora katta ta'sir ko'rsatmoqda. Ushbu maqolada ingliz va o'zbek tillarini o'qitishda sun'iy intellektni integratsiyalash muhokama qilinadi, yangi texnologiyalar ta'lim samaradorligi, o'quvchi faolligi va ta'limga kirish imkoniyatlarini qanday yaxshilayotganiga e'tibor qaratiladi. Ingliz tili o'n yillar davomida texnologik integratsiyadan foyda ko'rgan bo'lsa, o'zbek tili asta-sekin SI asosidagi til o'rgatish vositalarini qabul qila boshladi. Hozirgi tendensiyalar, tilshunoslikdagi muammolar va kompyuter lingvistikasi rolini tahlil qilgan holda, maqola zamonaviy ikki tilli ta'limda sun'iy intellektning ahamiyatini ta'kidlaydi.

**Kalit so'zlar:** Sun'iy intellekt, ingliz tilini o'qitish, o'zbek tilini o'rgatish, amaliy tilshunoslik, raqamli transformatsiya, til ta'lim texnologiyalari, ikki tilli ta'lim, tabiiy tilni qayta ishlash (NLP).

## Использование искусственного интеллекта в обучении английскому и узбекскому языкам в эру цифровой трансформации

Хужаев Дилшод Гайратович

[dilshodislombek@gmail.com](mailto:dilshodislombek@gmail.com)

Преподаватель кафедры общей лингвистики Узбекского государственного университета мировых языков

**Аннотация.** Цифровизация коренным образом меняет систему образования во всём мире, и искусственный интеллект (ИИ) всё больше влияет на то, как преподаются и осваиваются языки. В данной статье рассматривается интеграция ИИ в преподавание английского и узбекского языков, с акцентом на то, как новые технологии повышают эффективность обучения, вовлечённость учащихся и доступность образования. Английский язык уже давно использует достижения технологий, в то время как узбекский язык постепенно начинает внедрять ИИ-инструменты. Анализируя текущие тенденции, лингвистические особенности и роль компьютерной лингвистики, статья подчеркивает значимость ИИ в современной билингвальной языковой подготовке.

**Ключевые слова:** Искусственный интеллект, преподавание английского языка, обучение узбекскому языку, компьютерная лингвистика, цифровая трансформация, образовательные технологии, билингвальное обучение, обработка естественного языка (NLP).

Technological innovation has ushered in a new era in language education. Artificial intelligence tools are redefining how learners engage with languages by offering personalized feedback, smart assessments, and interactive experiences. English language teaching has widely adopted these innovations, whereas Uzbek, a less digitally represented language, is beginning to benefit from AI applications. This paper explores how AI can be leveraged in both English and Uzbek language instruction in the context of increasing digital integration.

### 2. AI's Impact on Language Learning

Artificial intelligence offers a wide spectrum of tools—such as natural language processing (NLP), automatic speech recognition, and intelligent tutoring systems—that support language learning in more dynamic and adaptive ways. These systems provide:

- Tailored instruction aligned with each learner's pace.
- Instantaneous correction of grammar, vocabulary, and pronunciation.
- Chatbots for conversation simulation.
- Smart testing systems that adapt to performance levels.

In English language education, widely used platforms like ChatGPT, Grammarly, and language learning apps utilize AI to optimize teaching outcomes.

### 3. English Language Education Enhanced by AI

Due to its global prominence, English has been at the forefront of AI implementation in language education. Students benefit from:

- AI-powered writing assistants that refine grammar and coherence.
- Voice-based platforms for pronunciation correction.
- AI-enabled comprehension tools such as auto-captioning and summarization.
- Conversational agents that replicate natural dialogues.

The extensive availability of English corpora and linguistic datasets makes the language ideal for NLP advancements.

**4. Integration of AI in Uzbek Language Teaching**

While not yet on par with English in terms of technological resources, Uzbek is seeing a surge in digital initiatives. These include the development of morphological analyzers, voice datasets, and basic machine translation systems. AI holds promise for:

- Automating grammar and spelling correction for Uzbek.
- Introducing intelligent tutors for learners abroad.
- Creating voice-based tools that recognize and produce Uzbek speech.
- Supporting foreign language learners through interactive learning environments.

These applications are made possible through emerging research in Uzbek computational linguistics.

**5. Comparative Analysis: English vs Uzbek in AI Integration**

Feature	English	Uzbek
Digital Resources	Extensive and mature	Limited but growing
AI-Powered Tools	Abundant and diverse	Still emerging
Linguistic Complexity	Analytic structure, fixed word order	Agglutinative, rich inflection
Standardized Assessments	Global (IELTS, TOEFL)	Mostly local, no global standard
Educational Demand	Worldwide	National and heritage learners

While English enjoys global investment in AI tools, Uzbek presents unique linguistic features that require more specialized AI applications.

**6. Computational Linguistics and Language Instruction**

Computational linguistics forms the foundation for many AI applications in education. For English and Uzbek, this includes:

- Building annotated corpora.
- Developing part-of-speech tagging tools.
- Advancing machine translation systems.
- Implementing language-specific NLP solutions.

Uzbek computational linguistics, although still emerging, is essential to creating effective AI-driven educational tools.

**7. Prospects and Recommendations**

To advance AI-based language education in both English and Uzbek, the following steps are recommended:

- Expand digital corpora for Uzbek.
- Develop AI-friendly language curricula.
- Provide professional development for educators in AI tools.
- Encourage collaboration between universities, government, and tech firms.
- Promote bilingual digital learning platforms.

By adopting a strategic approach, both languages can benefit from AI-enhanced education.

The digitalization era provides a unique opportunity to revolutionize language education through artificial intelligence. While English has already embraced a wide range of AI tools, the Uzbek language is making strides toward digital modernization. Leveraging AI and computational linguistics can lead to more inclusive, efficient, and engaging instruction for learners of both languages. Future developments depend on investments in language technology, interdisciplinary research, and institutional support.

### References

1. Ellis, N. C. (2017). *The Cognitive Approach to Second Language Acquisition*. Routledge.
2. Richards, J. C., & Rodgers, T. S. (2014). *Approaches and Methods in Language Teaching*. Cambridge University Press.
3. Vasilyeva, N., & Khodjayev, D. (2022). *AI and Morphological Analysis in Uzbek NLP*. *Journal of Computational Linguistics*, 10(3), 112–126.
4. Oxford, R. L. (2016). *Teaching and Researching Language Learning Strategies*. Routledge.
5. Karimov, M. (2020). *Digital Tools in the Teaching of Uzbek as a Foreign Language*. *Uzbek Language and Literature Journal*, 2(1), 39–47.
6. Duolingo Research Team. (2021). *AI in Language Education: Current Practices and Future Directions*.
7. Uzbek Academy of Sciences (2023). *UzbekBERT and Its Applications in AI-Based Language Processing*.