



EVALUATION OF EMPLOYING AI IN EFL EDUCATION

Sarsenbaeva Zoya Jangabay kizi

Doctor of Science (DSc), Act. Associate Professor

Head of the Department of Pedagogy and Languages, Scientific Advisor,

Institute of Social and Political Sciences, Uzbekistan

Dusmurodova Nodirabegim Urol qizi

4th Year Student, Department of Pedagogy and Languages

Major: Philology and Teaching Languages: English

Institute of Social and Political Sciences, Uzbekistan

Abstract

This article examines the historical evolution of AI provides essential context for evaluating its current state and future trajectories. AI can be broadly categorized into three types: narrow AI, designed for task-specific applications; general AI, characterized by human-like cognitive abilities; and superintelligent AI, which surpasses human intelligence across all domains. This classification framework helps delineate the scope and direction of AI research and development.

Keywords: AI, integrating, evaluation, educational outcomes, innovative technologies, English lessons.

Introduction

XORIJIY TIL TA'LIMIDA SI NI FOYDALANISHNI BAHOLASH

Sarsenbaeva Zoya Jangabay qizi

Filologiya fanlari doktori (DSc), dotsent v.b,

Pedagogika va tillar kafedراسي mudiri, Ilmiy rahbar,

Ijtimoiy-siyosiy fanlar instituti, O'zbekiston

Dusmurodova Nodirabegim Urol qizi

4-kurs talabasi, Pedagogika va tillar kafedراسي

Mutaxassislik: Filologiya va tillarni o'qitish: ingliz tili

Ijtimoiy-siyosiy fanlar instituti, O'zbekiston.



Annotatsiya

Mazkur maqolada sun'iy intellekt (SI) ning tarixiy rivojlanishini ko'rib chiqiladi, bu esa uning hozirgi holati va kelajakdagi rivojlanish yo'nalishlarini baholash uchun muhim kontekst yaratadi. SI odatda uch turga bo'linadi: tor doiradagi SI — aniq vazifalarni bajarish uchun mo'ljallangan; umumiy SI — insonnikiga o'xshash kognitiv qobiliyatlarga ega; va superintellektual SI — barcha sohalarda inson aqlidan ustun turadi. Ushbu tasniflash tizimi SI tadqiqotlari va ishlanmalarining ko'lami hamda yo'nalishini aniqlashga yordam beradi.

Kalit so'zlar: sun'iy intellekt, integratsiya, baholash, ta'lim natijalari, innovatsion texnologiyalar, ingliz tili darslari.

ОЦЕНКА ИСПОЛЬЗОВАНИЯ ИСКУССТВЕННОГО ИНТЕЛЛЕКТА В ОБРАЗОВАНИИ ИЗУЧЕНИЯ АНГЛИЙСКОГО ЯЗЫКА КАК ИНОСТРАННОГО

Сарсенбаева Зоя Жангабаевна

Доктор педагогических наук (DSc), и.о. доцента,
заведующая кафедрой педагогики и языков, научный руководитель,
Институт социально-политических наук, Узбекистан

Дусмуродова Нодирабегим Уроловна

Студентка 4 курса, Кафедра педагогики и языков
Специальность: Филология и преподавание языков: английский язык
Институт социально-политических наук, Узбекистан

Аннотация

Статья рассматривает историческую эволюцию искусственного интеллекта (ИИ), что предоставляет важный контекст для оценки его текущего состояния и будущих направлений развития. ИИ можно в целом разделить на три типа: узкий ИИ, предназначенный для выполнения конкретных задач; общий ИИ, обладающий когнитивными способностями, сходными с человеческими; и сверхинтеллектуальный ИИ, превосходящий человеческий интеллект во всех областях. Такая классификационная



структура помогает определить масштаб и направление исследований и разработок в области ИИ.

Ключевые слова: ИИ, интеграция, оценка, результаты обучения, инновационные технологии, уроки английского языка.

INTRODUCTION

The history of artificial intelligence (AI) can be traced to the mid-twentieth century, when foundational contributions were made by pioneering scholars such as Alan Turing, John McCarthy, and Marvin Minsky. The term “artificial intelligence” was introduced in 1956, marking the emergence of a new paradigm within computer science and cognitive science [1];[2]. Early AI systems were primarily grounded in symbolic reasoning and formal logic, aiming to emulate human cognitive processes through rule-based approaches. Although these systems established the conceptual foundations for subsequent advances in machine learning and neural networks, early progress was constrained by limited computational capacity and insufficient data availability.

Artificial intelligence (AI), in turn, plays a pivotal role in the educational domain by significantly contributing to teaching and learning processes as well as to student development. Ongoing advancements in AI technologies enable the creation of innovative educational platforms that improve both the efficiency and accessibility of learning. The application of AI to English language acquisition, as examined in this context, underscores the importance of integrating contemporary technologies into educational practices and highlights emerging opportunities for both learners and educators. As AI technologies continue to evolve, their implementation in foreign language instruction is becoming increasingly widespread and effective.

AI facilitates the development of personalized learning materials and tasks tailored to individual learners’ proficiency levels, needs, and learning pace. Through the use of machine learning algorithms and data analytics, AI systems are capable of identifying learners’ areas of difficulty and providing targeted instructional resources to enhance language proficiency.



LITERATURE REVIEW

Artificial intelligence (AI) is increasingly employed to assess and analyze students' language proficiency. AI-driven systems enable the automated evaluation of written and spoken production, including error detection, pronunciation analysis, and the generation of targeted feedback. Such systems enhance the objectivity and reliability of assessment while providing formative feedback that supports more effective learning outcomes.

One of the major innovations in English language pedagogy is the integration of conversational agents for speaking practice. These AI-based chatbots are capable of sustaining natural language interaction with users, thereby facilitating the development of communicative competence. Through real-time interaction, learners can refine grammatical accuracy and lexical usage while engaging in simulated dialogue. This form of interaction supports the practice of multiple linguistic competencies in a low-anxiety environment, contributing to more efficient acquisition of oral communication skills. Another significant technological advancement involves the use of virtual assistants for pronunciation training. Specialized applications and devices enable learners to practice segmental and suprasegmental features of speech, receiving immediate, automated feedback. This contributes to the development of phonological competence and enhances precision in pronunciation. Moreover, virtual assistants support individualized learning trajectories by allowing learners to focus on specific phonetic challenges and systematically address pronunciation errors.

The application of machine learning techniques in English language instruction also facilitates the improvement of writing skills. Machine learning algorithms can automatically analyze student texts, identify grammatical inaccuracies, and suggest appropriate corrections, while providing structured feedback on written performance. This approach not only reduces instructors' workload in error correction but also promotes learner autonomy by enabling students to iteratively refine their writing through timely and data-driven feedback.

AI technologies further enable the personalization of the educational process by accounting for individual learner characteristics and needs. Adaptive learning systems can tailor instructional materials, tasks, and pacing to align with learners' proficiency levels and cognitive profiles. Such personalization enhances learning



efficiency and sustains learner motivation, thereby improving overall educational outcomes.

Additionally, the integration of AI in language education contributes to increased accessibility. Through online platforms, conversational agents, and virtual assistants, learners can access educational resources irrespective of geographical location, temporal constraints, or financial limitations. This democratization of access significantly broadens participation in language learning on a global scale. However, the implementation of AI in education also raises concerns related to data privacy and ethical governance. The collection and analysis of learner data may pose risks regarding the protection of personal information and potential misuse. Accordingly, it is essential to establish robust data protection frameworks and ensure compliance with ethical standards that promote transparency, fairness, and security in AI-mediated learning environments.

Future developments in AI-assisted language learning are likely to focus on enhancing contextual understanding and semantic integration. Advanced AI systems may support deeper text analysis, enabling the identification of key concepts, interpretation of meaning, and integration of information across multiple sources. Such capabilities can facilitate learners' comprehension of linguistic nuances and improve their mastery of complex grammatical structures. The incorporation of virtual reality (VR) technologies represents another promising direction in English language education. Immersive VR environments allow learners to engage in simulated communicative contexts, interact with virtual interlocutors, and apply linguistic knowledge in practice-oriented scenarios. This experiential approach can significantly enhance communicative competence and help learners overcome language barriers.

AI also plays a critical role in supporting early-stage language acquisition. By delivering personalized instruction and adaptive feedback, AI systems can identify learners' weaknesses, recommend targeted exercises, and continuously adjust instructional strategies. This contributes to the establishment of a solid linguistic foundation and facilitates progressive skill development from the initial stages of learning.

Significant milestones in AI development include the emergence of expert systems in the 1970s, which demonstrated the capacity to perform domain-specific tasks through symbolic knowledge representation. The development of



machine learning algorithms in the 1980s and 1990s further expanded AI capabilities by enabling systems to improve performance through experience. In recent decades, breakthroughs in deep learning and neural network architectures have substantially advanced the field, resulting in systems that can outperform humans in tasks such as image recognition, natural language processing, and strategic gameplay [5]. Currently, AI has transformative potential across multiple sectors, including healthcare, finance, transportation, and entertainment, thereby playing a pivotal role in shaping contemporary society.

At its core, AI encompasses a range of technologies, including machine learning, natural language processing, robotics, and computer vision. These technologies enable systems to learn from data, interpret human language, interact with physical environments, and process visual information. Machine learning and deep learning, as subfields of AI, are particularly significant due to their reliance on algorithms and neural network models that facilitate learning from large-scale datasets and continuous performance improvement over time.

AI represents a multidisciplinary domain comprising diverse methodologies that enable machines to perform tasks traditionally associated with human intelligence. Fundamentally, AI seeks to replicate cognitive functions such as learning, reasoning, problem-solving, and perception. The field has evolved substantially, with contemporary systems capable of processing vast quantities of data, identifying patterns, and making autonomous decisions. Its applications extend beyond conventional computing to areas such as robotics and natural language technologies.

Recent scholarship has highlighted trends, research challenges, and application domains of AI in language education. Prior reviews have predominantly focused on AI in general educational contexts, while comparatively fewer studies have examined its role in specific domains such as language learning. To address this gap, researchers have investigated key questions concerning publication trends, major research issues, and common application areas of AI in language education. A subsequent systematic review commissioned by the British Council in 2024 represents one of the first comprehensive efforts to investigate how AI is utilized by learners of English as a second or additional language across age groups. This study applied rigorous inclusion criteria and ultimately analyzed 43 peer-



reviewed articles. Its primary objective was to examine the pedagogical applications of AI in English language teaching [3].

Overall, the literature indicates a growing need for comprehensive and methodologically robust research to evaluate the role of AI in language learning and teaching. Over the past three decades, researchers and practitioners have increasingly incorporated educational technologies into language education. However, one persistent challenge is the variability in learning outcomes among students with differing proficiency levels. To address this issue, machine learning algorithms and data analytics techniques can be employed to design personalized learning systems. Such systems enable learners, particularly those with lower proficiency, to progress at an individualized pace and achieve improved learning outcomes.

In recent years, AI has experienced rapid advancement driven by innovations in machine learning, deep learning, and neural network architectures. These developments have facilitated the creation of intelligent systems capable of processing complex inputs and generating adaptive responses, thereby enabling transformative applications across diverse domains. As AI becomes increasingly integrated into everyday life, a comprehensive understanding of its underlying principles and capabilities is essential for effectively navigating both its opportunities and associated challenges.

DISCUSSION

In addition, the literature identifies several advantages of employing artificial intelligence (AI) in foreign language learning and instruction. First, AI facilitates the provision of personalized learning experiences. Through advanced algorithmic systems, learners can be supplied with content tailored to their proficiency levels, individual needs, and preferences, which in turn enhances learner self-efficacy and motivation. Second, AI enables immediate corrective feedback. Learners are able to refine their knowledge based on automated responses; for instance, natural language processing (NLP) techniques integrated into automated writing evaluation systems can detect linguistic errors and deliver detailed feedback, thereby supporting timely learner intervention and self-regulation. Third, AI expands access to language learning by mitigating



contextual and resource constraints, allowing students to engage in learning activities ubiquitously and asynchronously.

Despite substantial advancements in AI, the development and deployment of such systems remain associated with a range of technical and socio-ethical challenges. These challenges span multiple dimensions, including data quality, algorithmic complexity, ethical considerations, and regulatory compliance. A central technical limitation concerns the requirement for large-scale, high-quality annotated datasets to effectively train machine learning models. The collection and annotation of such datasets are often resource-intensive, particularly in domains requiring specialized expertise or involving low-frequency phenomena. Algorithmic complexity constitutes an additional challenge, especially in the context of deep learning models characterized by extensive parameterization. The training, optimization, and fine-tuning of these models demand considerable computational resources as well as domain-specific expertise. Furthermore, ethical concerns represent a critical dimension of AI implementation, as such systems may reproduce existing biases, compromise data privacy, and exacerbate social inequalities if not designed and deployed responsibly.

Notwithstanding the recognized pedagogical potential of AI in language learning, concerns persist regarding its reliability and classroom readiness. Some scholars have questioned the validity of automated writing assessment, arguing that AI systems are limited in their capacity to evaluate subjective and context-dependent features of natural language. Computational semantic analysis tends to prioritize denotative meanings, often neglecting connotative nuances, thereby reducing the likelihood of accurately interpreting authorial intent and potentially leading to misassessment [4]. Similarly, issues have been identified in relation to the accuracy of automatic speech recognition technologies, as system outputs may vary depending on contextual factors, creating challenges for learners in processing natural language input. Given that interaction quality directly influences learning outcomes, such variability introduces uncertainty and may hinder effective AI-assisted language learning. Addressing these limitations requires continued technological refinement and rigorous system testing prior to large-scale implementation.

Skepticism regarding the effectiveness of AI in language education is also attributable to resistance among both educators and learners. Key challenges



identified in the literature include technological disruptions, such as system malfunctions and unstable connectivity, which may result in inaccurate outputs. Functional limitations also persist, particularly when users require more advanced or naturalistic interaction capabilities, potentially diminishing engagement. Psychological barriers constitute another dimension, encompassing concerns about data privacy and security, uncertainty regarding the operational mechanisms of AI, and apprehension about the loss of authentic, emotionally rich learning environments. Additionally, the standardization of language and embedded ideologies represents a significant issue, as AI systems may promote normative linguistic forms while overlooking sociolinguistic variation and contextual nuances.

CONCLUSION

Thus, it is important to note that a considerable proportion of empirical studies investigating AI in foreign (particularly English) language teaching lack detailed descriptions of the instructional materials and methodological frameworks employed. Greater transparency in reporting research design, pedagogical approaches, and instructional resources is essential to enable stakeholders to effectively interpret findings, replicate best practices, and understand the contextual conditions under which AI-enhanced learning is optimized.

In the contemporary global context, the study of foreign languages is accorded considerable importance due to its capacity to facilitate communication, intercultural exchange, and professional advancement. Proficiency in a foreign language contributes to the expansion of cognitive and cultural horizons, enhances social and cultural adaptation, and increases individuals' competitiveness within the labor market. The prospects for the development of education through the application of artificial intelligence are extensive and continually evolving. In the future, AI is expected to be more widely integrated into education, permeating multiple dimensions of the instructional process. It will facilitate the design of more flexible and adaptive educational programs that account for individual learner needs. Artificial intelligence technologies will be employed to develop interactive learning materials, virtual assistants, and online courses incorporating innovative pedagogical approaches, along with numerous other advancements aimed at enhancing the overall quality of education.



Overall, the integration of artificial intelligence into English language education constitutes a transformative development in contemporary pedagogy. Advances in machine learning, neural networks, and natural language processing enable personalized instruction, automated assessment, and continuous learner support. These technologies enhance the development of grammatical, reading, listening, writing, and speaking skills, thereby improving both the efficiency and effectiveness of language learning.

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