

Using Artificial Intelligence Technologies in English Language Teaching: A Literature Review

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Abstract: In this review article, based on literature published between 2018 and 2025, artificial intelligence (AI) technologies in English language teaching, especially large language models (Large Language Models, LLMs) and Automated Writing Evaluation (AWE) systems in English language teaching are analyzed. The article analyzes research on the use of artificial intelligence (AI) technologies in English language teaching, particularly Large Language Models (LLMs) and Automated Writing Evaluation (AWE) systems. The effectiveness of AWE systems like Grammarly, and the empirical evaluation of mobile platforms such as Duolingo (Shortt et al., 2023) are examined. The effectiveness of AWE systems like Grammarly and the empirical evaluation of mobile platforms such as Duolingo are examined. Based on systematic reviews conducted on the topic, a SWOT analysis of AI-based language instruction is presented. The review can serve as a theoretical basis for future empirical research on the use of AI tools in the Uzbek context.

Keywords: artificial intelligence, ChatGPT, large language models, automated writing evaluation, EFL, educational technology

Introduction

Over the past decade, artificial intelligence (AI) technologies have significantly transformed the field of education, including the teaching and learning of foreign languages. The public release of the ChatGPT chatbot by OpenAI in November 2022 is considered a turning point in this process. As Kasneci et al. [3] point out, Large Language Models (LLMs) are demanding a reevaluation of current educational practices, as they can generate text, translate, explain, and engage in Q&A at a level comparable to humans. Internationally, English holds a leading position as the global language of communication, science, and business. Uzbekistan is no exception: since 2012, English has been taught in public secondary schools starting in the first grade. At the same time, it is evident that traditional teaching methods cannot fully meet the needs of the digital generation of learners. Existing international literature indicates that AI tools have significant potential in English as a Foreign Language (EFL) learning, but most of these studies are from the USA, China, in European and Southeast

Asian countries; there is insufficient information about the opportunities and obstacles in less-researched contexts such as Uzbekistan, Central Asia, and the Uzbek language.

The purpose of the review is to summarize international literature published between 2018 and 2025 and to systematically address the theoretical and practical aspects of using AI tools in English language teaching. The review answers the following questions:

- How has language teaching evolved with the help of computers and AI?
- Which major AI tools are currently used in English language teaching, and which language skills do they support?
- What are the empirically proven advantages and disadvantages of AI-based language learning?
- What ethical and pedagogical issues arise when using AI tools?
- What recommendations can be developed for the education system of Uzbekistan?

This article is a review, and the author does not present empirical data; all conclusions are based on an analysis of published literature.

Methodology

This review was conducted based on a narrative literature review approach. Sources were searched on Google Scholar, Scopus, ScienceDirect (Elsevier), Springer Link, and SAGE Journals using the following keywords: "ChatGPT in languageteaching," "AI in EFL," "large language models in education," "automated writing evaluation," "Grammarly EFL," "Duolingo effectiveness."

Inclusion criteria for literature: (1) peer-reviewed scientific articles published between 2018 and 2025; (2) published in English; (3) directly related to the role of AI tools in English language teaching. Classic theoretical sources (Warschauer & Healey, 1998; Chapelle, 2001) were also included to illustrate the evolution of CALL.

The total number of sources is approximately 40, including 6 systematic reviews and meta-analyses, as well as key theoretical and empirical studies on the topic.

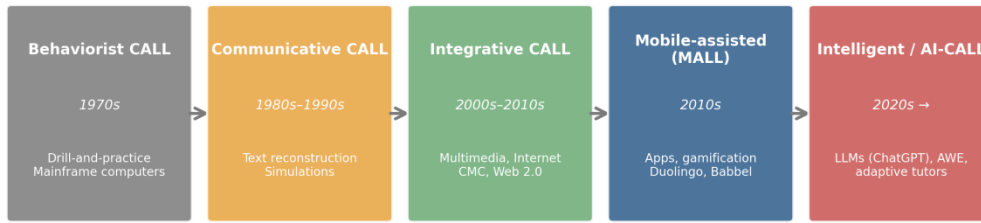
The Development of Computer-Assisted Language Learning

To understand artificial intelligence in its current form, it is useful to first review the history of computer-assisted language learning (CALL). Warschauer and Healey [1] divided the development of CALL into three main stages: behaviorist (1970s), communicative (1980-1990), and integrative (from the 2000s onward). Subsequent studies (Bax, 2003;

Chapelle, 2001 [2]) supplemented this classification with the stages of mobile-assisted language learning (MALL) and intelligent CALL.

Figure 1 presents the five-stage evolution of CALL. Each stage is distinguished by its characteristic technologies and pedagogical approaches.

Evolution of Computer-Assisted Language Learning (CALL)



Adapted from Warschauer & Healey (1998); extended with subsequent literature

Figure 1. The evolution of CALL: from the behaviorist phase to AI-CALL (source: Warschauer and Healey, 1998; expanded based on subsequent literature).

In the behaviorist phase, the computer provided the learner with mechanical exercises and drill-and-practice opportunities. In the communicative phase, the focus shifted to the learner’s exchange of meaning through language. In the integrative phase, the Internet and multimedia enriched instruction. In the 2010s, mobile learning (MALL) and apps like Duolingo, Babbel, and Memrise became popular. Since 2022, ChatGPT, Claude, and other LLMs have ushered in a new - intellectual or AI-based CALL - phase.

Current AI Tools and Language Skills

Today, AI tools used in English language teaching can be divided into several categories. In Figure 2, these tools are distributed across the four main language skills - listening, speaking, reading, and writing.

AI-Based Tools and the Four Language Skills

Listening	Speaking	Reading	Writing
YouGlish	ELSA Speak	ChatGPT (simplification)	Grammarly
AI dubbing / TTS systems	ChatGPT voice	Readlang, LingQ	ChatGPT, Claude
Podcast AI summarizers	Speeko, Yoodli (speech coaches)	Adaptive reading apps	QuillBot, DeepL Write

Cross-cutting tools: ChatGPT, Claude, Gemini, DeepSeek (general-purpose LLMs); Duolingo, Babbel (gamified, all-skills)

Figure 2. Alignment of AI-based tools with the four language skills

General-purpose LLMs (ChatGPT, Claude, Gemini, DeepSeek) can perform almost all language tasks. Kohnke et al. [4] list the following capabilities of ChatGPT in language teaching: determining the contextual meaning of words and phrases, explaining grammatical errors, generating text (letters, stories, essays), preparing tests and exercises, providing dictionary definitions.

Automated Writing Evaluation (AWE) systems - such as Grammarly, Pigai, and Criterion - analyze writing quality from grammatical, lexical, and stylistic perspectives

and provide feedback to the student in real time. In a systematic review of 39 articles, Ding and Zou [5] noted the positive impact of AWE systems on enhancing writing accuracy, fluency, and learner autonomy. Gamified platforms (Duolingo, Babbel, Memrise) maintain motivation through game elements (points, levels, streak). Shortt et al. [9], summarizing 35 studies on Duolingo, found an overall positive correlation between using the app and language proficiency.

Specialized pronunciation and spoken language tools (ELSA Speak, Speeko, Yoodli) assess pronunciation and help develop spoken language skills. Reading and vocabulary tools (Readlang, LingQ, Quizlet AI) are aimed at increasing vocabulary size.

ChatGPT and Large Language Models

In the influential work by Kohnke, Moorhouse, and Zou [4], "ChatGPT for Language Teaching and Learning" (over 350 citations), the role of ChatGPT in language teaching is approached as a technology review. The authors highlight three main areas: (1) as a personal tutor for students (explaining vocabulary, creating exercises); (2) a supporting role for teachers (lesson plans, assessment criteria, question bank creation); (3) as a tool requiring critical literacy.

The article by Kasneci et al. [3], published in the Elsevier journal "Learning and Individual Differences," was co-authored by 23 authors and analyzes the comprehensive changes that LLMs are bringing to education. The authors, while highlighting opportunities such as personalization, multilingualism, creative expression, and the creation of intellectual property, also warn about the risks of data reliability, academic integrity, the spread of misinformation, and social inequality.

In a mixed-methods study, Liu, Darwin, and Ma [10] examined the experience of Chinese EFL learners with AI-mediated Informal Digital Learning of English (AI-IDLE). They found that students perceived AI, unlike textbooks, as an engaging, motivational, and personalized learning tool.

Automated Writing Evaluation (AWE)

Ding and Zou [5] conducted a comparative analysis of three leading AWE systems - Grammarly, Pigai, and Criterion - across 39 empirical studies. The main findings are as follows: (1) AWE systems significantly improve writing accuracy and lexical diversity; (2) students have generally positive attitudes toward AWE; (3) however, AWE systems cannot handle higher-order writing skills (organization, coherence, idea development). A randomized controlled trial conducted in China involved 190 EFL students. In this study, the experimental group using Grammarly outperformed the control group in all components of the IELTS writing test - task achievement, coherence, vocabulary, and grammatical accuracy - (Frontiers in Psychology, 2023).

Mobile and Gamified Learning

Duolingo - the world's most popular language learning app - is also enriched with AI elements. Shortt et al. [9] analyzed 35 studies on Duolingo conducted between 2012 and 2020 and found an overall positive correlation between the app and language proficiency. In an independent study conducted by Avant Assessment, 245 users (Japanese, Spanish, and Portuguese speakers) scored above the expected results on the STAMP 4S test for reading and listening skills after completing Duolingo's A2 level - indicating that they had reached the CEFR B1 level.

Teachers and Pedagogical Practice

Recent studies have explored AI not only from the learner's perspective but also from the teacher's perspective. Bhullar, Joshi, and Chugh [12], in a synthetic review on ChatGPT in higher education, noted that teachers are increasingly using AI-assisted opportunities to automate lesson planning, assessment, and the creation of materials. However, the authors also note that the majority of teachers are not sufficiently prepared to use AI tools effectively.

SWOT analysis: opportunities and threats

Based on the literature reviewed above, a SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis of AI's role in English language teaching can be summarized (Figure 4). This analysis primarily relies on the systematic review by Mai, Van Da, and Van Hanh [6], as well as the works of Kasneci et al. [3] and Kohnke et al. [4].

Figure 4. SWOT analysis of AI use in English language teaching

Synthesized from Mai, Van Da & Van Hanh (2024); Kasneci et al. (2023); Kohnke et al. (2023)

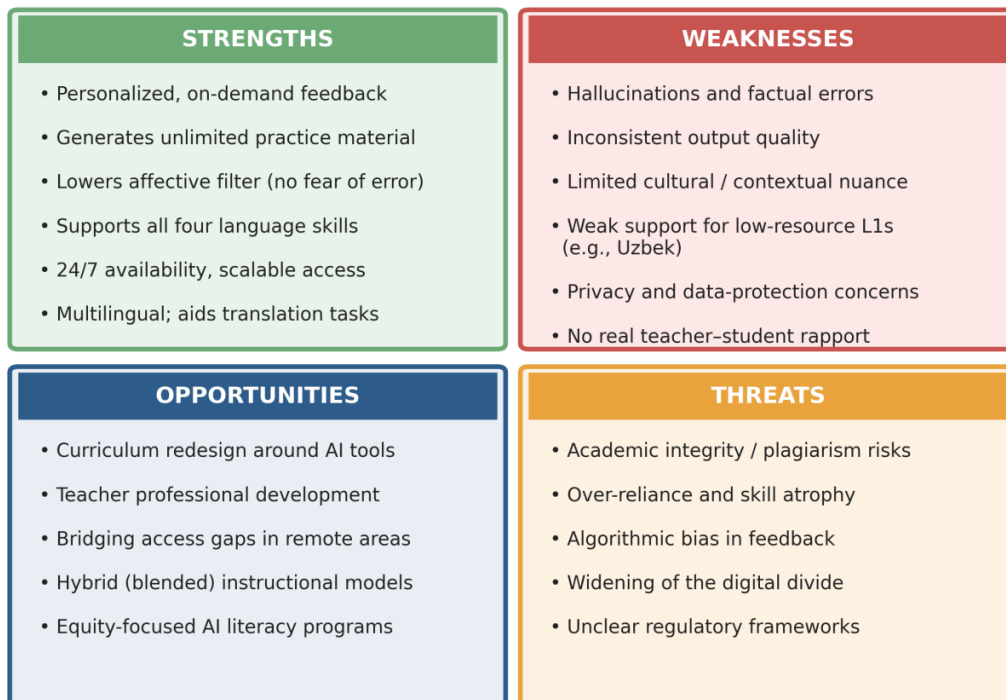


Figure 3. SWOT analysis of the role of AI in English language teaching (based on Mai et al. (2024), Kasneci et al. (2023), and Kohnke et al. (2023))

Discussion

The results of the review indicate that AI tools have significant potential in English language teaching. First, the most researched area is writing, with AWE systems (especially Grammarly) and LLMs having the strongest impact in this domain [5]. Second, vocabulary development is also progressing well with AI. Third, specialized tools for listening and speaking skills (ELSA Speak, ChatGPT Voice) are still new, but early results are promising. Conversely, the most problematic areas are pragmatic and contextual acquisition, cultural literacy, and creative writing. In these areas, AI cannot yet replace a real teacher.

Lo [7], in his review dedicated to ChatGPT's role in language education, identified the following gaps: (1) lack of long-term research - most studies lasted only a few weeks or months; (2) not geographically distributed - most studies were conducted in China, Europe, and the US; (3) the need for a deeper analysis of the teacher's role; (4) comparison of different age and proficiency groups. To date, there is very little empirical research on the implementation of AI in language education in Uzbekistan. The "Strategy for the Development of Artificial Intelligence Technologies," approved by the Decree PQ-358 of the President of the Republic of Uzbekistan on October 14, 2024, can encourage scientific work in this area.

In our context, aspects that require special attention are: (1) the development of AI solutions that support the Uzbek language - because the quality of AI in Uzbek is much lower than in English; (2) retraining teachers; (3) digital inequality between regions; (4) national ethical standards.

Conclusion

Artificial intelligence, especially LLMs and AWE systems, has opened a new - intellectual - phase in English language teaching. This stage does not replace the previous stages of CALL (behaviorist, communicative, integrative, mobile), but rather enriches them. Current research shows that AI tools are most effective for writing (Grammarly, ChatGPT), vocabulary development, and reading, and are rapidly improving in the areas of spoken language and pronunciation. The most effective approach is to view AI not as a tool to replace teachers, but as one corner of a teacher-student-AI triangle. To achieve this, digital and AI literacy competencies must be developed. The priority tasks for Uzbekistan's education system include: teacher training, the development of Uzbek language-supporting AI solutions, establishing ethical standards, and promoting empirical research.

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