

Chapter 1

AI in Education: Revolutionizing English Learning

Saddam Hossain

 <https://orcid.org/0009-0001-9996-4963>

Khulna University, Bangladesh

Farhana Yeasmin

 <https://orcid.org/0000-0002-0954-7489>

Jashore University of Science and Technology, Bangladesh

Shahjahan Kabir

Khulna University, Bangladesh

ABSTRACT

Today, English has emerged as a medium of instruction, communication, and job opportunities worldwide. As it has been acknowledged that ordinary means of language learning cannot help to address the diverse needs of all learners, AI has revolutionized the approach to English education. The major apps, including Duolingo, Babbel, and ELSA Speak, integrate AI that caters to the lessons depending on each individual's fluency, accent, and speed level. Tools like Carnegie Learning's MATHia, ITS, and NLP give feedback using naturally processed language. Other applications, such as AR, VR, Grammarly, and Turnitin, facilitate giving feedback in the classroom. AI also has the positive effect of universal learning, as seen with Google Translate. However, inequality, insufficient access to devices, and privacy issues must be resolved. The inability of AI to preserve interpersonal communication should not be ignored, and the ethical issues related to the aid of AI must not be downplayed.

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I. INTRODUCTION

Integrating artificial intelligence (AI) into education represents a transformative shift in how languages, mainly English, are taught and learned. As a global *lingua franca*, English is pivotal for academic achievement, career advancement, and intercultural communication. However, traditional language teaching methods and approaches often fail to accommodate diverse learner needs, cultural contexts, and varied proficiency levels. These negatively affect the degree of learning a language, especially English. Most significant approaches to language teaching leave little room for their individuality, cultural background, and different learning abilities. By leveraging AI, educators can address these challenges, creating personalized, interactive, and effective learning experiences that cater to individual students' requirements (Aybirdi, 2023; Negrila, 2023). AI in education is a revolutionary phenomenon for learning languages and, generally, the English language. English is an important medium of communication and is considered the key to success in academic sessions, professional careers, and intercultural business and commerce. With the help of AI, one can design personal, universal, and progressive learning spaces. New technologies in natural language processing will help distinguish figures of speech and dialects, among other linguistic barriers, to make the growth of language lessons and instructions more contextual. Also, using AI and VR/AR technologies will give students more realistic experiences that will help them speak more fluently, especially when the test requires them to act out real-life situations (Freeman et al., 2009; Zhao & Liu, 2022). This innovation also enhances cross-cultural understanding, a valuable tool in an increasingly interconnected world.

Dedicated and innovative technologies like NLP and deep learning have enriched English language teaching and learning (ELT). These tools give direct feedback so the learners know how to correct their syntactical, grammatical, and pronunciation mistakes. For example, Grammarly and ProWritingAid help students with the coherence and style of writing and relieve teachers of the work of manual evaluation (Schmidt & Strasser, 2022). Similarly, speech recognition tools such as ELSA Speak offer learners instant feedback on pronunciation as they work on their fluency patterns and strike down anxiety as a barrier in oral communication (Rusmiyanto et al., 2023). These kinds of tools help the learners in their tasks and encourage them so they are not left behind, which is important for learners with language barriers. One of AI's most important promises in ELT is personalization capability. Artificial intelligence processes the student information to generate relevant content and exercises based on each student's capabilities. For instance, Duolingo and Babbel personalize lessons according to the learner's fluency, accent, and rate; they ensure the materials are comprehensible. These systems also apply learner rewards and

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