

The Use of AI-Technologies Integrated into ELT: A Novel Learning Environment

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Abstract: *Artificial intelligence is a recent development in technology, especially in computer systems. Education will become more flexible and tailored to each learner's needs through the use of AI technology. AI-powered learning environments are transforming education by replacing the one-size-fits-all approach with effective, interesting, and personalized methods. The reason for this technology's rapid growth is its capacity to fundamentally change many aspects of the teaching and learning processes. There are practical, advanced AI tools for learning English.*

Keywords: AI-Technologies, AI-Tools, ELT, Learning Environment, Learner's Needs, Personalized Methods

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1. Introduction

The most recent advancements in artificial intelligence (AI) technology have significantly altered every aspect of daily life. AI has a big impact on practically every field related to the internet-based world. A collection of technologies known as artificial intelligence (AI) allows computers to carry out a wide range of sophisticated tasks, including as seeing, comprehending, and translating spoken and written language, analyzing data, making suggestions, and more. Artificial intelligence is the ability of technology, particularly computer systems, to mimic human intelligence processes.

Artificial intelligence is a new technology that is starting to change educational institutions and resources. Artificial intelligence has a fantastic impact on higher education that benefits both students' motivation and the teaching-learning process. Because artificial intelligence changes how quickly humans learn, its application in education has grown in popularity. Teachers are necessary for the best educational approach in the field of education. The development of artificial intelligence has an impact on the employment of teachers, who are essential to the educational system. To track an individual's relative speed to others, the AI mainly uses machine learning, deep learning, and sophisticated analytics.

Artificial intelligence is revolutionizing traditional teaching techniques and offering innovative approaches to enhance language learning in the field of education, particularly in English Language Teaching (ELT). This introduction sets the stage for analyzing the substantial impact of AI in ELT by highlighting its capacity to personalize instruction, produce stimulating environments, and meet the diverse needs of learners.

Research interest in AI's educational applications and tools for teaching English as a foreign language has increased due to the recent rise of AI in daily life. By providing individualized learning opportunities, technological developments have the potential to revolutionize conventional teaching approaches. ChatGPT and other AI tools promise to improve teaching effectiveness and student learning results. Innovative tools provided by technological advancements transform traditional teaching techniques by enhancing personalized learning, real-time feedback, and language practice.

2. The Significance of AI Technologies

A subfield of computer science called artificial intelligence (AI) seeks to create machines that can carry out tasks that normally require human intelligence. AI makes it possible for machines to mimic human skills including comprehension, learning, problem-solving, and decision-making. Artificial intelligence (AI), a technical component of practically every element of life, is now ingrained in our culture. Therefore, it is crucial to comprehend its importance and how AI benefits the current scientific and educational systems. For a better understanding, consider the following definitions of AI:

- Artificial intelligence (AI) is technology that allows machines to simulate human intelligence and cognitive capabilities. AI can be used to help make decisions, solve problems and perform tasks that are normally accomplished by humans, (builtin).

- Artificial Intelligence (AI) is the ability of a computer or a robot controlled by a computer to do tasks that are usually done by humans because they require human intelligence and discernment. (Britannica)
- Artificial Intelligence (AI) is, according to (AI HLEG) of the European Commission (EC), “Systems that display intelligent behaviour by analysing their environment and taking actions – with some degree of autonomy – to achieve specific goals.”(High-Level Expert Group on Artificial Intelligence, 2019)
- In general sense, Artificial Intelligence (AI), furthermore, acknowledged as machine intelligence, is a branch of computer science that focuses on building and managing technology that can learn to autonomously make decisions and carry out actions on behalf of a human being. (Techopedia, 2023).
- AI is the new electricity, says Andrew Ng (co-founder of Google Brain and a leader in the AI industry), “Just as electricity transformed almost everything 100 years ago, today I actually have a hard time thinking of an industry that I don’t think AI will transform in the next several years”.

In the current context, artificial intelligence (AI) is crucial because it seeks to give robots the same processing and analysis power as humans, making AI a helpful counterpart to humans in daily life. AI can solve complex problems, understand and sort data at scale, and automate multiple processes at once, all of which can save time and fill in operational gaps that people miss. AI is employed in practically every area, from manufacturing and education to healthcare and finance, and it forms the basis for computer learning. Artificial intelligence is used by several current technologies to improve capabilities. For instance, e-commerce sites with recommendation systems, smartphones with AI assistants, and cars that can drive themselves.

Artificial intelligence (AI) is a major aspect of human life and has an impact on many different areas, from technology and the economy to healthcare, education, and society at large. AI technologies facilitate simple, international communication and teamwork. AI connects people and fosters worldwide interactions through social networks and online collaborative platforms. AI technology will make education more adaptable and customized to meet the demands of each individual learner. Particularly in AI system development and management, AI will generate new employment prospects. Artificial intelligence holds great promise for improving human lives. AI will become more and more commonplace in the future. Scientific research, healthcare, mobility, security, automated learning, and many more areas are anticipated to be significantly impacted.

3. Review of Literature

3.1. Integration of AI-Technologies into ELT

The use of artificial intelligence in education is still evolving, offering innovative ways to increase learning opportunities outside of traditional classroom walls while allowing instructors to focus on other crucial aspects of their jobs. AI has huge potential to enhance teaching and learning processes and create more engaging, inclusive, and successful learning opportunities for educators and learners.

This is also evident in the area of English Language Teaching and acquisition (ELT), where it has been discovered that integrating AI into ELT has the potential to revolutionize instructional strategies and language acquisition (Mabuan, 2024). AI integration has been shown to disrupt English language teaching (ELT) and alter the duties of ELT instructors. English teachers now face difficulties with their instructional approaches and student support services as a result of AI integration and application.

English language learners can now encounter new things that they would not be able to in a traditional classroom simply because of the technology available on educational programs. In contemporary education, the use of technology in the teaching and learning process is increasingly inevitable. The use of technology to enhance students' educational experiences is known as technological integration. Since technology has been demonstrated to boost student enthusiasm and engagement, which enhances learning results, it is crucial for language study. Students can acquire critical and creative thinking, teamwork, communication, and problem-solving skills—all of which are crucial for success—by skillfully integrating AI technology.

In order to achieve effective spoken involvement, a variety of technologies are employed to improve students' pronunciation. Since technology is becoming a crucial part of the teaching-learning process, it is imperative that aspiring English teachers receive training on how to effectively use it in the classroom.

The introduction of AI will have an impact on everyone since it is invading our most personal lives. ELT and technology are now nearly synonymous. Technological advancements eventually have an impact on ELT. The emergence of the AI era has unavoidably altered ELT practice and comprehension. The rapidly developing field of artificial intelligence and its implications for language teaching can improve student learning strategies. AI also aids in lesson planning, classroom activities, and administrative processes (Tulasi & Rao, 2023).

3.2. AI Technologies/Tools Used in ELT

The reason for this technology's rapid growth is its capacity to fundamentally change many aspects of the teaching and learning processes. There are practical, cutting-edge AI tools for learning English. The quality of our educational systems can be greatly improved by AI techniques and technology. Artificial intelligence (AI) is rapidly growing in the realm of education. AI can provide "smart content," reduce language barriers, and close the knowledge gap between teaching and learning. The AI tools and technologies listed in Table 1 are provided by many innovative businesses to get the greatest results in the field of education.

S. No.	AI Tool/Technology	Description/Uses	Source
1	Babbel	to learning a new language effectively. It's a comprehensive language Learning.	https://www.babbel.com/
2	Carnegie Learning's Platforms	It is a cutting-edge provider of curriculum and education technology; uses for the subjects of math, literature, or foreign languages; it also provides Fast ForWord, a reading and language program that aids in the development of cognitive skills in learners.	https://www.carnegielearning.com/
3	Diffit	Useful in generating a reading passage with key vocabulary words and comprehension questions.	https://web.diffit.me/
4	Duolingo	It's a language learning platform, notable for its bite-sized lessons for LSRW skills, gaining real-world communication skills.	https://www.duolingo.com/
5	Elsa	An AI-driven English teaching tool aids non-native speakers in honing their speaking abilities, i.e. pronunciation, accent, and rhythm using natural language.	https://elsaspeak.com/en/
6	Grammarly	It is a tool to correct grammar, spelling and offers real-time style. Helpful suggestions to improve written work.	https://www.grammarly.com/
7	Knowji	an audio-visual vocabulary application, uses for language learners; it employs a variety of techniques and ideas to speed up learning, helping students get better at learning over the course of time.	https://www.knowji.com/
8	Langua	This tool serves as a platform for language learning. Designed specifically for conversation practice and speaking fluency development.	https://languatalk.com/
9	Loora AI	It is specifically designed for language Learning and offers a high-quality conversational experience.	https://www.loora.com/
10	Nuance's Dragon	This tool can transcribe up to 160 words	https://www.nuance.com/dragon/indus

	Speech Recognition	per minute. For students who need accessibility features, the program, enabling verbal instructions to navigate papers; also dictating lesson plans, syllabi, worksheets, reading lists, etc.	try/education-solutions.htm
11	Orai	it can make students to master new public speaking strategies, interactive training and in-depth analyses of recorded speech. It is honing one's oratory talents, helping individuals improve their speaking abilities.	https://orai.com/
12	Praktika	It is for Interactive English conversation practice, providing a fully realistic language learning environment. Users can improve their English communication skills	https://praktika.ai/
13	Quizlet	It is employed on new words and phrases. Allows retrieval practice to help learner's master new words and phrases.	https://quizlet.com/in
14	Twee	Helpful in creating comprehension questions, transcripts, and generating dialogues, stories, letters or articles on any topic and for any level.	https://twee.com/
15	Wordwall	Creating interactive and engaging activities for English language learners. Helpful in interactive Games and quizzes.	https://wordwall.net/

Table 1: AI Technologies/Tools

4. AI Tools and ELT Learning Environment

AI-driven learning environments are revolutionizing education by substituting efficient, engaging and customized systems for the one-size-fits-all approach. These settings simplify administrative duties, provide real-time feedback around-the-clock, and customize curriculum to each student's needs using algorithms and machine learning.

The way that students learn second or foreign languages has been completely transformed by AI-powered language learning apps. These apps provide immersive learning experiences by fusing aspects like speech recognition, gamification, and adaptive learning. Learners can acquire English language communications abilities with the help of AI tools and popular platforms listed in Table 1. Such customization fosters learner perseverance and drive, both of which are essential for long-term language acquisition. Language learning applications may now mimic real-world conversational situations thanks to recent AI-generated material. Therefore, in order to guarantee a balance between technology efficiency and human empathy in language learning, integrating AI-based technologies with teacher-guided instruction is essential.

Self-directed learning in ELT enables students to take an active role instead of just being passive consumers of information. By offering self-paced learning environments where students can explore content based on their interests and skill levels, AI-based solutions support this autonomy (Holec, 1981).

5. Conclusion

A collection of technologies known as artificial intelligence (AI) allows computers to carry out a wide range of sophisticated tasks. Artificial intelligence is the ability of technology, particularly computer systems, to mimic human intelligence processes. Artificial intelligence is a new technology that is starting to change educational institutions and resources. The development of artificial intelligence has an impact on the employment of teachers. The substantial impact of AI in ELT highlights its capacity to personalize instruction, produce stimulating environments, and meet the diverse needs of learners. AI technology will make education more adaptable and customized to meet the demands of each individual learner. The rapidly

developing field of artificial intelligence and its implications for language teaching can improve student learning strategies.

AI-driven learning environments are revolutionizing education by substituting efficient, engaging and customized systems for the one-size-fits-all approach. The way that students learn second or foreign languages has been completely transformed by AI-powered language learning apps. Therefore, self-directed or AI-powered learning in ELT enables students to take an active role instead of just being passive consumers of information. By offering self-paced learning environments where students can explore content based on their interests and skill levels.

References

Carvalho, L., Martinez-Maldonado, R., Tsai, Y. S., Markauskaite, L., & De Laat, M. (2022). How can we design for learning in an AI world? *Computers & Education: Artificial Intelligence*, 3, Article 100053. <https://doi.org/10.1016/j.caeai.2022.100053>.

Darayseh, Abdulla Al (2023). Acceptance of artificial intelligence in teaching science: Science teachers' perspective. *Computers and Education: Artificial Intelligence* 4 (2023) 100132.

H. Holec. (1981). *Autonomy and Foreign Language Learning*. Oxford: Pergamon.

Hekmat, Ali Mohammad et al. (2024). The Impact of Artificial Intelligence (AI) in Effective English Language Teaching. *AFGHAN MEDICAL JOURNAL* 2024 1(2).

Kim, N., & Kim, M. (2022). Teacher's perceptions of using an artificial intelligence-based educational tool for scientific writing. *Frontiers in Education*, 7. <https://doi.org/10.3389/educ.2022.755914>. Article 755914.

Kok, J. N., Boers, E. J., Kosters, W. A., van der Putten, P., & Poel, M. (2009). *Artificial intelligence: Definition, trends, techniques, and cases. Knowledge for sustainable development: An insight into the encyclopedia of life support systems*. Eolss Publishers.

Mabuan, R. A. (2024). ChatGPT and ELT: Exploring Teachers' Voices. *International Journal of Technology in Education*, 7(1), 128-153. <https://eric.ed.gov/?id=EJ1415045>

Nils J. Nilsson, *The Quest for Artificial Intelligence: A History of Ideas and Achievements* (Cambridge, UK: Cambridge University Press, 2010).

Pavel Hamet and Johanne Tremblay (2017). Artificial intelligence in medicine. *Metabolism* Volume 69, Supplement, April 2017, Pages S36-S40.

P. Stone et al (2016). Artificial intelligence and life in 2030: The one hundred year study on artificial intelligence. <https://arxiv.org/ftp/arxiv/papers/2211/2211.06318.pdf>.

Peng C, Zhou X, Liu S (2022). An introduction to artificial intelligence and machine learning for online education. *Mobile Networks and Applications*. 2022 Jun;27(3):1147-50.

Raja, Ramesh S, et al. (2024). Utilizing AI-Based Technology for English Teaching and Learning. *International Journal of Engineering Research & Technology (IJERT)*. Volume 12, Issue 01 Published by, www.ijert.org ISSN: 2278-0181

Rani, Sirisha Ch. (2025). AI Tools in English Literature and Language Education Across the World: Self-regulation, Motivation, and Satisfaction. *Telangana Journal of Higher Education (TJHE) | Vol. 1, No. 2 (July–December 2025) | ISSN: 3108-0693*. <https://tgche.ac.in/telangana-journal-of-higher-education-tjhe/>

Ratna Rintaningrum (2023) Technology integration in English language teaching and learning: Benefits and challenges, *Cogent Education*, 10:1, 2164690, DOI: 10.1080/2331186X.2022.2164690.

Tira Nur Fitria (2021). The Use Technology Based On Artificial Intelligence In English Teaching And Learning. *ELT Echo : The Journal of English Language Teaching in Foreign Language Context* (2021), Vol 6(2). DOI: 10.24235/eltecho.v%vi%i.9299.

Topal, A. D., Eren, C. D., & Geçer, A. K. (2021). Chatbot application in a 5th grade science course. *Education and Information Technologies*, 26(5), 6241–6265. <https://doi.org/10.1007/s10639-021-10627-8>

Tulasi, L. and Rao, C.S. 2023. Integration of AI-technologies into ELT: A brief study. *Journal for Research Scholars and Professionals of English Language Teaching*, 7(38): 03. <https://doi.org/10.54850/jrspelt.7.38.003>

U.S. Department of Education (2023). *Artificial Intelligence and the Future of Teaching and Learning: Insights and Recommendations*, May 2023.

Zhai, C and Wibowo, S (2023). A systematic review on artificial intelligence dialogue systems for enhancing English as foreign language students' interactional competence in the university. *Computers and Education: Artificial Intelligence* 4 (2023) 100134.

Zhao, L., Chen, L., Liu, Q., Zhang, M., & Copland, H. (2019). Artificial intelligence-based platform for online teaching management systems. *Journal of Intelligent and Fuzzy Systems*, 37(1), 45–51.

Zuraina Ali (2020). Artificial Intelligence (AI): A Review of its Uses in Language Teaching and Learning. *IOP Conference Series: Materials Science and Engineering*. DOI 10.1088/1757-899X/769/1/01204.

Websites Consulted

<https://www.unesco.org/en/digital-education/artificial-intelligence>

<https://timesofindia.indiatimes.com/readersblog/newtech/artificial-intelligence-in-education-39512/>

<https://www.cambridge.org/elt/blog/2020/03/09/artificial-intelligence-english-language-learning/>

<https://www.britannica.com/technology/artificial-intelligence>

<https://intellias.com/how-ai-helps-crack-a-new-language/>

<https://www.analyticssteps.com/blogs/5-advantages-using-ai-language-learning>

<https://www.unite.ai/10-best-ai-tools-for-education/>

<https://www.blueprism.com/resources/blog/types-of-ai/>

<https://www.teachingenglish.org.uk/publications/case-studies-insights-and-research/artificial-intelligence-and-english-language>

<https://builtin.com/artificial-intelligence>