

SAKAGURU
JOURNAL OF PEDAGOGY AND CREATIVE TEACHER
VOL. 2 NO. 2 (2025)

ISSN: 3064-0113

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To cite this article A. S. T. Al-selwi, “Artificial Intelligence : Implications for English Language Teaching,” *SAKAGURU J. Pedagog. Creat. Teach*, vol. 2, no. 2, pp. 81–90, 2025. <https://doi.org/10.70211/sakaguru.v2i2.282>.

To link to this article:



Published online: Oct 09, 2025



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Artificial Intelligence: Implications for English Language Teaching

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Received: June 26, 2025

Revised: August 24, 2025

Accepted: October 07, 2025

Online: October 09, 2025

Abstract

Artificial intelligence (AI) has made significant changes in several fields. It covers many applications and is still a rather multidisciplinary and emerging field. English Language Teaching (ELT), which is a branch of applied linguistics, is one of those fields that has received a huge impact from advanced AI empowerment technologies and applications, such as chatbots and tutoring systems. This study, therefore, examines the impact of AI on ELT, and the various ways that AI influences ELT. It explores the new future roles of teachers and learners in English classrooms, which will be AI-driven. The study is qualitative in nature, which explores emerging trends and themes in AI and ELT and examines potential developments. Through qualitative analysis of recent scholarly publications, the research identified key and emerging techniques for integrating AI in ELT classrooms. It employed thematic analysis to examine the data collected, focusing on experts' perspectives regarding future opportunities, trends, and prospects in AI and ELT. AI technologies and applications provide innovative techniques that cater to each 21st century learner's needs, autonomy, and engagement with different proficiency levels, and give effective feedback to English teachers. They also foster language acquisition, can help identify the strengths and weaknesses of learners, and offer English teachers opportunities to customize lessons and enhance their teaching strategies. All these make the English learning process operative, more appealing, and tailored. This paper, therefore, provides valuable implications and insights for practitioners, learners, applied linguists, and higher educational institutions in developing relevant teaching materials and training programs for teachers.

Keywords: AI-driven classrooms; Artificial intelligence (AI); Learners; Teachers; Technology.

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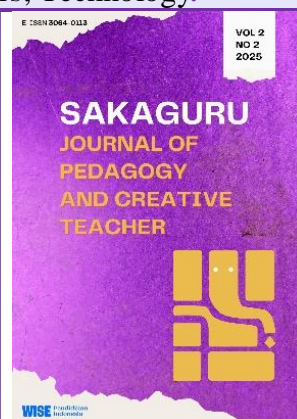
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INTRODUCTION

Language teaching and learning has been reimagined as a result of the use of technology, particularly Artificial Intelligence (AI) and the Internet, which has made it more effective, interesting, and accessible [1]–[3]. The significance that these technology innovations play in language acquisition will only grow more apparent and irreplaceable as we continue to accept them [4]–[7]. This will pave the way for educational techniques that are more inventive and successful.

From the use of traditional methods such as rote memorization and grammatical translation to the communicative approaches that highlight interaction and practical usage, the process of language instruction has undergone significant evolution over the course of several centuries [8]–[11]. Throughout history, language training has relied significantly on tangible materials such as textbooks and in-person instruction, which frequently hindered accessibility and adaptation [12]–[14]. Nevertheless, over the course of the past thirty years, the incorporation of technology into language education has brought about a fundamental transformation of the terrain, making language learning more dynamic, interactive, and accessible [15]–[17]. The use of contemporary technology has evolved into an instrument that is indispensable in the field of language instruction [18]. An unprecedented number of resources, such as online courses, language learning platforms, virtual classrooms, and interactive forums, became available to people as a result of the birth of the Internet. Through the advent of this technology revolution, education became more accessible to students from all over the world, making it possible for them to obtain high-quality language training and resources whenever it is most convenient for them. The discipline of ELT, which is a subfield of applied linguistics, has been significantly influenced by the development of powerful AI empowerment technologies and applications. These include chatbots and tutoring systems [19]–[21].

There have been substantial shifts in a number of different sectors as a result of AI, which is a relatively interdisciplinary and developing field. AI has emerged as a significant advance in the technology landscape of language teaching, and it is a development that is vital [22]–[24]. Although ideas related to AI have been present for decades, it has only been in the past two years, notably after the year 2022, that AI has become publicly available and integrated into learning tools that are used in everyday life [25], [26]. Language learning has been changed as a result of the emergence of AI-powered platforms such as ChatGPT. These platforms offer tailored, quick feedback and create dynamic learning environments that can adjust to the pace and style of the student. AI plays a diverse function in the education of language learners. Giving intelligent tutoring systems, automating administrative duties, and giving advanced analytics to track and improve learner performance are some of the ways in which it improves upon traditional techniques [27], [28]. AI-driven solutions have the ability to imitate real-life conversations, provide assistance with pronunciation, and provide practice with vocabulary that is specific to the context, thereby making language learning more practical and successful.

Recent years have witnessed growing scholarly attention to the integration of AI in English Language Teaching (ELT), with numerous studies examining its pedagogical applications and impacts. L. Wei et al. [6], for instance, conducted a quantitative investigation into the potential of AI for teaching, learning, and professional development in English as a Foreign or Second Language (EFL/ESL). Using data from semi-structured questionnaires, their

study highlighted both benefits and challenges, revealing that AI-driven engagement strategies can enhance teacher professional growth and student achievement despite existing drawbacks. These findings offer valuable insights for educators and policymakers in adopting AI tools to improve the effectiveness of ELT practices.

Alhusaiyan's study [29] reviewed a decade of research on AI-assisted language acquisition using activity theory to analyze 15 empirical studies. The results indicated improvements in writing quality, scoring accuracy, and learner engagement, though challenges remain in dialogic competence and the need for teacher mediation in instructional design. The author emphasized the necessity of integrating AI tools with pedagogical theories and conducting classroom-based research to examine their real-world impact on teaching and learning. Similarly Hınız [30] explored the experiences of 14 EFL instructors and 13 students regarding the use of ChatGPT in language instruction through focus groups and interviews analyzed via reflexive thematic analysis. Findings revealed that generative AI chatbots enhance proficiency, provide diverse learning resources, and promote inclusivity, yet concerns persist about reliability, plagiarism, and potential effects on learners' cognitive and metacognitive development. Both studies underscore the importance of aligning AI adoption with sound pedagogy and teacher adaptation to ensure effective and ethical implementation in language education.

The study by Sharma et al. [31] examined the multifaceted effects of AI on English Language Teaching (ELT), highlighting its pedagogical benefits, limitations, and implications for both teachers and learners. Their findings stress the need to address ethical concerns, algorithmic bias, and teacher preparedness to fully harness AI's potential in promoting communicative competence and effective language learning. Similarly, AL-Maktoumi [32] conducted a qualitative study on the role of AI in shaping the future of English instruction at Omani universities. The study explored how educators' responsibilities evolve in AI-enhanced classrooms and emphasized the benefits of chatbots and tutoring systems in fostering learner autonomy, personalization, and engagement. Overall, both studies underscore that ethical integration and teacher adaptation are key to realizing AI's transformative potential in English language education.

Earlier, Fitria [33] explored the role of AI in ELT and its applications. Her study reveals that AI offers an effective learning environment for English acquisition, allowing learners to practice English skills based on their proficiency level, vocational requirements, or interests. AI provides a simulation dialogue platform for spoken English and enhances practical writing skills. Advancements in technology and platforms have made English language acquisition more accessible. AI technology is used in various ELT programs, such as Google Translate, Text to Speech, English Able, Orai, Elsa, chatbots, Duolingo, and Neo platforms, to simulate human thought and behavior.

The aforementioned research works on AI synergies in ELT have advanced considerably; yet, key deficiencies persist in six areas. The evidence gap arises from insufficient empirical validation, as most studies depend on short-term pilot studies and lack real-world scaling assessments. The knowledge gap arises from an insufficient comprehension of how AI integration facilitates ELT. The relationship between AI-driven personalization and ELT remains little examined. The gap in practical knowledge arises from insufficient analysis of practical constraints, including technical limitations, ethical issues, and accessibility obstacles.

The empirical gap arises from insufficient evidence regarding the quantifiable impact of AI synergy on teacher performance. The methodological gap arises from biases in sample selection and limited data scale. The theoretical gap arises from the absence of interdisciplinary frameworks and ethical perspectives.

This study aims to bridge the knowledge gap by meticulously assessing and analyzing the significance and impact of AI in ELT, specifically on the integration of AI with ELT. It analyzes the influence of AI on ELT and the several methods through which AI affects ELT. It also examines the future responsibilities of teachers and learners in AI-driven English classrooms. The study is, therefore, qualitative in nature, investigating existing trends and topics in AI and ELT while examining prospective developments. It seeks to reinvent the future of ELT by exploring this gap with the newest advanced immersive IT technologies.

The study's objectives are to identify the numerous ways in which AI impacts ELT, to examine the challenges, to investigate the emerging roles of educators and students in AI-enhanced English classrooms, and to investigate the developing practical implications of AI in ELT. These aims correspond with overarching frameworks like the Sustainable Development Goals (SDGs) by advancing quality education (Goal 4) using innovative pedagogical approaches, cultivating inclusive learning settings (Goal 10), and augmenting lifelong learning opportunities (Goal 4.7) [34]. The study, therefore, enhances worldwide initiatives aimed at educational progress and equity by addressing these concerns and sustainable learning experiences. The next section presents the methodology used to achieve these objectives.

METHODS

Research Design

This study employed a qualitative, literature-based research design using a narrative review approach to examine the implications of artificial intelligence (AI) in English Language Teaching (ELT). The narrative review method was selected for its flexibility in synthesizing diverse sources—empirical, conceptual, and theoretical—to capture recent developments and pedagogical trends. This design enabled a critical interpretation of how AI influences teaching practices, learner engagement, and teacher roles, while identifying ethical and professional challenges.

Population and Sample

Secondary sources comprise academic databases, institutional reports, conference proceedings, as well as books and theses. Secondary research involves analyzing data gathered by others, providing a basis for new insights without the need for primary data collection. It is essential for situating new research within existing knowledge [35]. The data collection process for the study included keyword searches, concentrating on studies published from 2022 to early 2025, with an emphasis on theoretical frameworks or empirical results. Publications in languages other than English and opinion pieces were excluded from consideration.

Research Procedure and Instruments

As stated above, the research employed a desktop methodology, referred to as secondary research, to investigate the integration of AI in ELT. Desktop research is a methodical approach

to gathering and analyzing pre-existing data from published sources, thereby minimizing the necessity for new primary data. This method is economical, efficient in time utilization, and comprehensive, facilitating access to a variety of global studies and historical trends. It provides historical context and benchmarks; however, it is limited by the potential for outdated data. Desktop research was deemed appropriate due to its feasibility, resource limitations, and foundational insights. It corresponds with the study's exploratory objectives, suits projects with restricted budgets or timelines, and builds upon existing work to identify results, findings and future research avenues. The forthcoming section presents the results and findings revealed by this method.

RESULTS AND DISCUSSION

The various ways that AI influences ELT

To quote Sharma et al. [36], there are many different ways to look at the relationship between AI and ELT, which is both complicated and varied. AI technologies enable personalized learning by adapting instruction to individual learners' needs, preferences, and proficiency levels. They provide immediate feedback and assessment, enabling students to identify and correct errors in real-time. AI also facilitates enhanced language practice through interactive simulation, language games, and virtual reality (VR) environments. AI-powered language learning applications extend access to quality education by breaking down geographical and socio-economic barriers, promoting equity and inclusivity in ELT. AI technologies support English language teachers by providing tools for lesson planning, instructional design, and student assessment. AI-driven analytics offer insights into students' learning progress and performance, enabling teachers to adapt their teaching strategies and provide targeted interventions.

The integration of AI in ELT encourages the exploration of innovative pedagogical approaches that foster active learning, collaboration, and creativity. AI-driven collaborative learning environments, project-based activities, and peer tutoring systems promote student engagement and autonomy, transforming traditional classroom dynamics. The relationship between AI and ELT also includes research and development efforts aimed at advancing AI technologies and their applications in language education. However, some challenges are still identified.

Challenges

Despite the significant benefits and impacts of AI on ELT, there are still some challenges. There are a number of practitioners and scholars [1], [2], [6], [16] believe that the use of AI in ELT could result in a great deal of difficulties. A selection of these difficulties, along with some potential remedies, are outlined in Table 1.

Table 1. Challenges raised from the implementation of AI in ELT with suggested solutions

Challenges	Solutions
Bias in AI algorithms may reinforce stereotypes or favor certain linguistic variants.	Ensure diverse data representation and methodical algorithm design, along with continual oversight.

Ethical concerns regarding learner autonomy and data privacy.	Strive for a balance between using learner data for personalization and protecting students' privacy rights.
Dependence on AI raises questions about the role of educators and the risk of replacement.	Provide ongoing professional development to help teachers integrate AI effectively into their lesson plans.
Need for digital literacy skills among teachers to utilize AI tools.	Offer training in data analysis and creating engaging AI-driven learning experiences.

Forms of teachers and students in AI-enhanced English classrooms

In English classrooms that are driven by AI, teachers will act as guides, facilitators, and evaluators. AI software can provide teachers with the ability to personalize materials that are in line with the levels of their students and provide exercises that are suitable for improving both the students' skills and the teaching process [4]. Moreover, class time and instructor time are extremely valuable due to the fact that teachers spend a significant amount of time developing lessons and preparing resources. AI has the potential to significantly reduce the amount of time that teachers spend developing materials, so allowing them to devote more of their attention to cultivating connections with their students and monitoring their progress. By analyzing the specific learning data of each individual student, AI is able to provide teachers with recommendations for the learning materials, exercises, and practice activities that are most suitable for the student [17].

The research conducted by Tolstykh and Oshchepkova [21]. seeks to illustrate the spectrum of AI services relevant to foreign language education and categorize them based on their usefulness. The authors identified 150 accessible online instruments utilizing AI and assessed them based on specific criteria, enabling the categorization of these tools according to their potential classroom applications. This may assist teachers in making educated choices regarding suitable tools for specific teaching contexts or in recommending tools to students that could enrich the learning experience. Using AI, teachers can be assisted with activities such as grading a large number of student assignments and providing learners with fast feedback.

Learners will be empowered by AI, more motivated, more independent, entrenched in the culture, and culturally curious. AI has the ability to provide students with more specific and precise corrections, while at the same time allowing teachers to avoid overcorrecting mistakes in the classroom since they respect the confidence of their pupils [14]. The fact that AI-generated feedback does not include any interaction with a human being makes it less likely that students would experience feelings of embarrassment as a result of their failures [9]. This enables teachers to provide pupils with more in-depth feedback from AI on specific problem areas, while also allowing teachers to deliver more complete training on social standards and body language.

In addition, AI can provide students with crucial assistance, including immediate feedback from automated systems [20]. AI techniques markedly enhance students' verbal competencies and classroom interactions. They may provide a communication experience that induces greater relaxation in learners compared to human interaction by assisting them in overcoming shyness [6] and anxiety [30]. Generative AI can proficiently assist in many language competencies: speaking, listening, reading, and writing. The utilization of AI will

enhance learners' independence and provide greater freedom in their educational pursuits. VR technology, together with AI algorithms, immerse learners in virtual environments where they can practice speaking, listening, and engaging in English with simulated native speakers. Moreover, vocabulary analysis tools are explicitly crafted to evaluate and improve learners' vocabulary.

To sum up, the collection of AI-driven coaching tools offers an extensive array of materials designed for the requirements of both language teachers and learners. AI possesses significant capacity to generate a tailored environment wherein learners engage their senses to simultaneously develop English skills according to their proficiency level, professional requirements, or interests. AI offers persistent, tailored instruction, delivering learners the vast volume of feedback and scaffolding tasks needed to attain fluency, all within a low-stakes context. The classrooms will become more intelligent through the integration of advanced applications and AI tools that enhance the responsibilities of both teachers and learners, providing significant utility by conserving time and effort for all parties involved.

CONCLUSION

This study underscores the transformative role of artificial intelligence (AI) in English Language Teaching (ELT), revealing its capacity to personalize instruction, enhance feedback accuracy, and foster learner autonomy. At the same time, it highlights persisting challenges related to ethical considerations, teacher readiness, and equitable access. The findings suggest that sustainable AI integration requires pedagogical innovation aligned with ethical frameworks and continuous professional development. By synthesizing technological, pedagogical, and ethical perspectives, this study contributes to the growing discourse on AI-driven education and positions AI as a catalyst for paradigm shifts in language pedagogy. Future research should empirically investigate classroom-based implementations, assess long-term impacts on teacher roles and student outcomes, and explore culturally responsive strategies for ethical and inclusive AI adoption in language education.


LIMITATIONS

One of the limitations of the present research is that it relies on qualitative methods (based on secondary sources) to examine both the impact of AI on ELT and the various ways in which AI influences ELT. The primary objective of the study is to ensure that AI is effectively integrated and that educational outcomes are enhanced. Therefore, it is essential for future research to address the practical issues that are involved with integrating AI in ELT for educational purposes using quantitative and qualitative methods. This is because addressing these issues will enable an improvement in educational outcomes.

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CONFLICT OF INTEREST

"The author declares no conflict of interest regarding the publication of this paper. All research conducted was carried out without any financial or personal relationships that could influence the results."

DECLARATION OF USE OF AI IN SCIENTIFIC WRITING

The author used QuillBot during the preparation of this work to verify grammar. After utilizing the tool, the author thoroughly reviewed and edited the content as necessary and assumed full responsibility for the publication's content.

REFERENCES

- [1] H. Crompton, A. Edmett, N. Ichaporia, and D. Burke, "AI and English language teaching: Affordances and challenges," *Br. J. Educ. Technol.*, vol. 55, no. 6, pp. 2503–2529, Nov. 2024. [Online]. Available: <https://doi.org/10.1111/bjet.13460>
- [2] J. H. Woo and H. Choi, "Systematic Review for AI-based Language Learning Tools," Oct. 2021. [Online]. Available: <https://doi.org/10.9728/dcs.2021.22.11.1783>
- [3] B. Kutsyk and S. Nykyporets, "The Impact of Artificial Intelligence on Language Learning," 2024.
- [4] W. Kritandani, R. Aryani, and T. Rakasiwi, "A Report Review: Artificial Intelligence and the Future of Teaching and Learning," *Int. Res. Educ. J.*, vol. 6, no. 2, p. 245, 2024. [Online]. Available: <https://doi.org/10.17977/um043v6i2p245-253>
- [5] R. Jesudas and Z. Mohammed, "Innovative approaches to language learning: The power of technology in education," 2025, p. 050024. [Online]. Available: <https://doi.org/10.1063/5.0278363>
- [6] L. Wei, "Artificial intelligence in language instruction: impact on English learning achievement, L2 motivation, and self-regulated learning," *Front. Psychol.*, vol. 14, Nov. 2023. [Online]. Available: <https://doi.org/10.3389/fpsyg.2023.1261955>
- [7] D. Pérez-Jorge, E. Olmos-Raya, A. I. González-Contreras, and I. Pérez-Pérez, "Technologies applied to education in the learning of English as a second language," *Front. Educ.*, vol. 10, Mar. 2025. [Online]. Available: <https://doi.org/10.3389/educ.2025.1481708>
- [8] E. M. Kuznetsova, "Evolution of Foreign Language Teaching Methods," *Mediterr. J. Soc. Sci.*, Nov. 2015. [Online]. Available: <https://doi.org/10.5901/mjss.2015.v6n6s1p246>
- [9] S. Diana, "Communicative Language Teaching and Its Misconceptions about the Practice in English Language Teaching (ELT)," *J. Pendidik. Bhs. dan Sastra*, vol. 14,

- no. 1, p. 36, Apr. 2014. [Online]. Available: https://doi.org/10.17509/bs_jpbs.v14i1.700
- [10] B. Schmenk, "Of Origin and the Communicative Turn," *Crit. Multiling. Stud.*, vol. 5, pp. 7–36, 2017.
- [11] T. Raymond, "Translation in Foreign Language Pedagogy: The Rise and Fall of the Grammar Translation Method," 2013.
- [12] S. K. Hilgendorf, "History of Language-Teaching Methods," in *The Encyclopedia of Applied Linguistics*, Wiley, 2020, pp. 1–5. [Online]. Available: <https://doi.org/10.1002/9781405198431.wbeal0510.pub2>
- [13] Y. A. Alghamdi, A. M. Alghamdi, and T. G. Alsolami, "English Language Teaching: Historical Overview, Current Issues and Suggestions for Enhancing Speaking Proficiency in EFL Contexts," *Arab World English J.*, vol. 10, no. 2, pp. 270–283, Jun. 2019. [Online]. Available: <https://doi.org/10.24093/awej/vol10no2.21>
- [14] L. Bunrosy and K. Vireak, "Evolution of English Language Teaching (ELT) Methodologies and Contemporary Trends: A Critical Analysis of the Cambodia Context," *Eur. J. English Lang. Teach.*, vol. 9, no. 6, pp. 1–29, 2024. [Online]. Available: <https://doi.org/10.46827/ejel.v9i6.5723>
- [15] G. Urbaite, "The Role of Technology in Modern Language Education," *EuroGlobal J. Linguist. Lang. Educ.*, vol. 1, no. 1, pp. 3–10, Jul. 2024. [Online]. Available: <https://doi.org/10.69760/w00r1v81>
- [16] S. Iqbal, S. Niazi, and M. Hafeez, "Developments on Technology Integration in Language Teaching and Learning," *Glob. Educ. Stud. Rev.*, vol. VI, no. III, pp. 21–28, Sep. 2021. [Online]. Available: [https://doi.org/10.31703/gesr.2021\(VI-III\).03](https://doi.org/10.31703/gesr.2021(VI-III).03)
- [17] R. Shadiev and X. Wang, "A Review of Research on Technology-Supported Language Learning and 21st Century Skills," *Front. Psychol.*, vol. 13, Jul. 2022. [Online]. Available: <https://doi.org/10.3389/fpsyg.2022.897689>
- [18] M. González-Lloret, L. Canals, and J. E. Pineda Hoyos, "Role of Technology in Language Teaching and Learning amid the Crisis Generated by the COVID-19 Pandemic," *Íkala*, vol. 26, no. 3, pp. 477–482, Sep. 2021. [Online]. Available: <https://doi.org/10.17533/udea.ikala.v26n3a01>
- [19] M. Aslan, "The Evolution of Language Education in the Digital Age," 2025.
- [20] N. F. Davar, M. A. A. Dewan, and X. Zhang, "AI Chatbots in Education: Challenges and Opportunities," *Information*, vol. 16, no. 3, p. 235, Mar. 2025. [Online]. Available: <https://doi.org/10.3390/info16030235>
- [21] Z. Chen, W. Wei, and D. Zou, "Generative AI technology and language learning: global language learners' responses to ChatGPT videos in social media," *Interact. Learn. Environ.*, pp. 1–14, Jun. 2025. [Online]. Available: <https://doi.org/10.1080/10494820.2025.2511248>
- [22] E. Latif et al., "AGI: Artificial General Intelligence for Education," Mar. 2024.
- [23] Y. Walter, "Embracing the future of Artificial Intelligence in the classroom: the relevance of AI literacy, prompt engineering, and critical thinking in modern education," *Int. J. Educ. Technol. High. Educ.*, vol. 21, no. 1, p. 15, Feb. 2024. [Online]. Available: <https://doi.org/10.1186/s41239-024-00448-3>
- [24] B. Li, Y. L. Tan, C. Wang, and V. Lowell, "Two years of innovation: A systematic

- review of empirical generative AI research in language learning and teaching," *Comput. Educ. Artif. Intell.*, vol. 9, p. 100445, Dec. 2025. [Online]. Available: <https://doi.org/10.1016/j.caeai.2025.100445>
- [25] X. Tan, G. Cheng, and M. H. Ling, "Artificial intelligence in teaching and teacher professional development: A systematic review," *Comput. Educ. Artif. Intell.*, vol. 8, p. 100355, Jun. 2025. [Online]. Available: <https://doi.org/10.1016/j.caeai.2024.100355>
- [26] S. Elnaffar, F. Rashidi, and A. Z. Abualkishik, "Teaching with AI: A Systematic Review of Chatbots, Generative Tools, and Tutoring Systems in Programming Education," Oct. 2025.
- [27] J. Han et al., "RECIPE: How to Integrate ChatGPT into EFL Writing Education," May 2023. [Online]. Available: <https://doi.org/10.1145/3573051.3596200>
- [28] F. Karataş, F. Y. Abedi, F. Ozek Gunyel, D. Karadeniz, and Y. Kuzgun, "Incorporating AI in foreign language education: An investigation into ChatGPT's effect on foreign language learners," *Educ. Inf. Technol.*, vol. 29, no. 15, pp. 19343–19366, Oct. 2024. [Online]. Available: <https://doi.org/10.1007/s10639-024-12574-6>
- [29] E. Alhusaiyan, "A systematic review of current trends in artificial intelligence in foreign language learning," *Saudi J. Lang. Stud.*, vol. 5, no. 1, pp. 1–16, Jan. 2025. [Online]. Available: <https://doi.org/10.1108/SJLS-07-2024-0039>
- [30] G. Hınız, "A year of generative AI in English language teaching and learning - A case study," *J. Res. Technol. Educ.*, pp. 1–21, Sep. 2024. [Online]. Available: <https://doi.org/10.1080/15391523.2024.2404132>
- [31] É. Supérieure, "Artificial Intelligence in Education: A Double Edged Sword for Teaching and Learning," vol. d, no. 02, pp. 1–23, 2016.
- [32] N. Al-Rashed, "The Impact of Artificial Intelligence on the Future of Media," *Int. J. Sci. Res.*, vol. 3, no. 7, pp. 65–85, 2024. [Online]. Available: <https://doi.org/10.59992/IJSR.2024.v3n7p3>
- [33] T. N. Fitria, "Artificial intelligence (AI) technology in OpenAI ChatGPT application: A review of ChatGPT in writing English essay," *ELT Forum J. English Lang. Teach.*, vol. 12, no. 1, pp. 44–58, Mar. 2023. [Online]. Available: <https://doi.org/10.15294/elt.v12i1.64069>
- [34] United Nations, "Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all," 2021. [Online]. Available: <https://sdgs.un.org/goals/goal4>
- [35] H. Nassaji, "Qualitative and descriptive research: Data type versus data analysis," *Lang. Teach. Res.*, vol. 19, no. 2, pp. 129–132, Mar. 2015. [Online]. Available: <https://doi.org/10.1177/1362168815572747>
- [36] S. Sharma, J. M. R. Krishnamaraju, P. Divakaran, Ravita, and Kavita, "Impact of Artificial Intelligence on English Language Teaching," *Commun. Appl. Nonlinear Anal.*, vol. 32, no. 9s, pp. 2602–2609, 2024. [Online]. Available: <https://doi.org/10.52783/cana.v32.4563>