



A Critical Analysis of Research on the Use of Artificial Intelligence in English Language Teaching in Thailand: Conflicting Results and Methodological Limitations

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Received 07/02/2026 Received in revised form 19/06/2026 Accepted 05/07/2026	ABSTRACT Artificial Intelligence (AI) has transformed modern education by offering adaptive learning environments and transforming traditional pedagogical approaches. This article examines empirical findings surrounding the benefits, challenges, and applications AI tools into English Language Teaching (ELT), specifically focusing on the Thai ELT context, to uncover current controversies and methodological limitations. The review reveals that while AI offers significant affordances, such as personalizing learning, reducing student anxiety, lowering teacher workload, and improving language skills, it also introduces critical pedagogical tensions. Notable challenges include ethical concerns such as plagiarism, learners' over-reliance on technology, accent biases, and the inability of AI to

	detect cultural nuances and authentic human emotions. Furthermore, the analysis highlights prominent methodological shortcomings in existing Thai ELT research, including positive publication bias, an over-reliance on short-term qualitative self-reports, and a lack of robust mixed-methods or longitudinal studies capable of controlling for novelty effects. The study concludes that current literature frequently overlooks the practical integration of AI within traditional, human-centric teaching methodologies. To achieve a mature and sustainable AI-enhanced ELT paradigm, the paper recommends a forward-looking research agenda prioritizing longitudinal, mixed-methods studies and the development of balanced pedagogies that harmonize AI innovations with the traditional teacher-student relationships deeply rooted in Thai culture. Keywords: Artificial Intelligence, English Language Teaching, Thai Education, Educational Technology
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Introduction

Artificial intelligence (AI) is rapidly changing the world, and English language teaching (ELT) is no exception. In recent years, interest in using and researching Artificial Intelligence (AI) tools to boost the effectiveness of English Language Teaching and Learning has been remarkably growing both globally and locally such as Thailand. In Thailand, a great number of studies on the use of AI in English language teaching has been published (e.g. Apridayani et al., 2025; Boontong et al., 2025; Chumpavan et al., 2024; Songsiangchai, 2025; Tanharat & Phootirat, 2025; Thongsan & Anderson, 2025; Waluyo & Kusumastuti, 2024). These studies reveal critical issues concerning the conflicting results of the use of AI in terms of learner outcomes, learners' attitudes towards AI, research contexts and research methodologies. This raises the need to synthesize and analyze the literature on the use of AI in teaching and learning English as a global language in Thai educational contexts.

This study is an initial attempt to synthesize the empirical findings of these studies to uncover the controversies and knowledge gaps regarding the use of AI in teaching and learning English in the current educational landscape of Thailand. The aim of the paper is to call for collaborative scholarly efforts to address these context-specific tensions so that AI tools can be utilized with sound pedagogies.

The literature included in this critical analysis was identified through searches across major academic databases and scholarly indices using keywords related to AI applications in language learning, with a specific focus on the Thai higher education context. The articles were selected based on their relevance to key themes, including learner outcomes, pedagogical challenges, and methodological approaches. This selection prioritized recent empirical research published within the last five years to highlight current controversies and knowledge gaps.

The paper begins with a brief discussion of how AI has influenced ELT, what benefits it offers, and what challenges are emerging on the global scale. This is followed by a review of the most recent literature on the use of AI in ELT in Thailand. The paper concludes with recommendations on critical issues that need further research to inform the future use of AI tools in ELT in Thai educational ecology.

The Global Use of AI tools in ELT: Benefits and Challenges

Artificial Intelligence (AI) has developed from rule-based AI, which was designed for administrative efficiency and corrective feedback to Generative AI (GenAI) and Large Language Models (LLMs) and has become increasingly integral to educational systems in almost every country. This has shifted the pedagogical paradigm from computer-assisted instruction to AI-driven cognitive partnership. It has been recognized that educational technologies. The integration of AI into educational settings marks a transformative shift, offering unprecedented opportunities to personalize learning, enhance student engagement, and optimize educational outcomes (Zheng et al., 2021).

The benefits of GenAI to ELT teachers and learners are numerous and the potential is bound to increase as technology is still fast developing. AI has supported language teaching and learning with studies in different aspects for both learners and teachers. For learners, personalized and immediate feedback are valuable for second or third language learners who need consistent correction and practice. AI addresses this need by creating adaptive learning environments, and efficiently providing feedback, identifying learners' strengths and weaknesses, and developing their language skills more effectively (Luckin & Cukurova, 2019; Mepo & Rigja, 2025). It has been observed that AI applications in ELT also help overcome challenges in developing the four core language skills: speaking, reading, writing, and listening. Learners use AI-powered platforms to practice these skills in a supportive environment, which research indicates improves their self-regulated learning and confidence. Additionally, conversational AI tools help develop learners' emotional and cognitive skills, enriching the language

learning experience by creating interactive and engaging practice opportunities (Lai & Lee, 2024).

On the side of teachers, AI can be of help by reducing workload through automated feedback, error correction, and lesson planning. This is especially useful in large classrooms where giving timely and consistent personalized feedback can be challenging. AI tools allow teachers to give instant, detailed feedback on language tasks, thereby meeting the need for individualized support (Mepo & Rigia, 2025; Pokrivčáková, 2019; Syafei & Nuraeningsih, 2025). Furthermore, AI can act as a support system, providing tailored assistance that adjusts to each learner's progress, instilling more independent and effective language learning habits. As the use of AI in language education has been increasingly widespread, this article aims to examine empirical findings and explore how AI is being applied in the Thai ELT context.

Despite the potential of AI to support language education such as offering new tools and resources to enhance learning, their use also raises important questions regarding ethics and responsibility (Cogo et al., 2024). While studies reveal the benefits of AI-enhanced English language learning, researchers also report relevant concerns such as incidences of academic dishonesty or students' attempts to take advantages of AI tools to gain unfair advantages (Xie et al., 2023). Kohnke et al. (2023) reported the results of a qualitative study on a small group of Hong Kong University instructors (N=12) that teachers lacked digital competencies and pedagogical knowledge needed to effectively implement AI tools in the classroom.

AI Application in ELT Context

In the AI era, understanding how AI works and impacts people's lives has become a growing priority in both educational and research contexts. There has been an increasing number of studies regarding AI applications by English language learners and educators since AI has gained tremendous popularity among scholars worldwide. Empirical research consistently shows that AI-driven tools, such as chatbots and automated writing tools, enhance learners' language skills, particularly in writing, reading, speaking, and vocabulary development (Ekizer, 2025; Lai & Lee, 2024; Mepo & Rigia, 2025). For instance, Grammarly, Chat GPT, and You.com serve as an assistant writing tool that provides real-time feedback on grammar, vocabulary, and structure (Giray, 2024; Özdere, 2025), leading to improved accuracy, broadened lexical repertoire, and learner confidence (Syafei & Nuraeningsih, 2025).

Additionally, ELSA Speak, Replica, Duolingo, and Orai AI are AI-powered language learning applications EFL learners use to practice their

speaking skills (Alpika, 2026; Kristiawan et. al., 2024; Tolstykh & Oshchepkova, 2024; Tuong & Dan, 2024; Warman et al., 2023). Moreover, Google's Speech-to-Text API and AI Speak provide feedback on fluency, intonation, rhythm, pitch, and phonetics developing learners' awareness in improving verbal skills (Dennis, 2024; Liakina & Liakin, 2023).

Research shows that learners, especially the struggling readers, remarkably develop their reading comprehension when they use Chatbots and Conversational AI tools (Silor & Silor, 2025). Kusumawati et al. (2025) also observed that TuinLec, and AI-integrated Intelligent tutoring systems (ITS) served as a scaffold in enhancing elementary students' abilities to identify main ideas and interpreting the organization of texts. Similarly, Yuan (2025) reported that Chinese EFL learners' reading comprehension augmented, their anxiety reduced using Smart Sparrow, an AI-driven reading platform.

Studies also reveal that AI positively influences learners' emotional factors, such as motivation, engagement, and anxiety, because AI supports personalized and adaptive learning experiences, which are essential for addressing diverse learner needs (e.g., Özçelik, 2025). For example, learners can use conversational AI tools and practice their language skills more confidently and autonomously in an interactive and low-anxiety self-paced learning environment (Ekizer, 2025; Lai & Lee, 2024).

AI offers significant benefits not only for learners but also for teachers. AI can reduce educators' workload through automated assessment, grading, insights on learner progress and feedback (Abrar et al., 2025), helping teachers manage their classrooms more efficiently (Luckin & Cukurova, 2019; Szabó & Szoke, 2024). It can also aid in creating individualized instruction, providing immediate feedback, and supporting self-regulated learning by allowing learners to monitor and adjust their performance and progress (Crompton et al., 2024). Furthermore, instructors have more time for providing emotional support, developing cognitive abilities, communication and interaction when AI does routine tasks (Yadav et al, 2025).

On the other hand, research also underscores several challenges associated with AI integration in ELT. Some notable challenges include concerns of over-reliance on AI tools, potential reduction in critical thinking and authentic interaction, and ethical concerns such as plagiarism and academic integrity. Technological limitations and the lack of educational programs or professional training for educators to effectively incorporate AI into their teaching (Sahdrina et al., 2024) are also critical issues. Ramakrishnan et al. (2024) argued that the effectiveness of AI integration into education may depend on the instructors' AI skills and knowledge.

Another concern from a Global Englishes perspective is that AI systems still may have accent bias as the tools prioritize native speakers'

accents (Kang & Hirschi, 2025). This can be attributed to the fact that AI models are largely trained on English-language datasets originating from Western academic and business environments, leading them to reinforce standardized and Anglocentric language norms. Thus, excessive dependence on AI-generated suggestions may constrain the creativity and adaptive negotiation processes that are fundamental to human ELF communication (Rudik & Ter-Grygoryan 2025). Moreover, a significant drawback is AI's inability to detect cultural sensitivity (Rudik & Ter-Grygoryan 2025), learners' real emotions, motivation, body language, and facial expressions, which are the crucial elements human teachers can monitor (Holmes et al., 2019). This indicates that AI cannot replace teachers but can be a complementary tool for more efficient classroom management.

A recent systematic review on the use of AI in English language teaching and learning by Crompton et al. (2024) identifies a great number of affordances of AI in teaching and learning English as a global language. These include personalized learning, self-regulated learning, learners' reduced anxiety, expanded vocabulary, enhanced writing skills, improved competence in using the target language for communication, automatic marking, providing feedback, adaptive educational experiences, intelligent tutoring and prediction systems. However, the review also highlights critical challenges. The first challenge is related to relevant published research which did not report the challenges arising from the use of AI in the language classroom due to the positive publication bias. The second challenge is related to the standard language ideologies, which are in conflict with the Global Englishes pedagogy. Thirdly, while research shows that AI helps to reduce learners' anxiety, it is unknown whether AI can prepare learners to be anxiety-free when facing with human interlocutors in their real-life conversations. Finally, there has not been effective solutions to ethical challenges regarding 'building awareness about the limitations and risks of AI and debating the various aspects of AI ethics' (Ziesche & Kumar Bhagat, 2022).

AI Application in Thai ELT Context

A rapid increase in research on AI technology in Thai ELT demonstrates that many educational institutions in Thailand have started implementing AI as a supporting tool in EFL classrooms (Raungsawat et al., 2025). However, studies by Thai scholars (e.g. Chaipidech et al., 2022; Ingkavara et al., 2022; Khampusaen, 2025; Limna & Saengchart, 2025; Meniado et al., 2024; Pitukwong & Saraiwang, 2024; Tanharat & Phootirat, 2025; Thangthong et al., 2024) have shown that AI-oriented personalized strategies enhance autonomy and teacher development in the context of Thai higher education.

Songsiengchai (2025) reported the results of their mixed-methods study with 120 university Thai students divided equally into the control group and experimental group. The aim of the study is to examine the effectiveness of Artificial Intelligence (AI) models like Chat GPT to facilitate English language learning. Quantitative data showed a statistically significant difference in the learner outcome as measured in standardised English tests between the two groups. Qualitative data collected from focus group interviews demonstrated high motivation, strong self-confidence, and a positive attitude shift among the students. While the findings of this study are interesting, it is not clear about the benefits of AI to student individuals, and the focus group interviews did not allow the diverse voices to be heard. Particularly, there is no information reported regarding the tasks and the materials used for learning driven by Chat GPT. Also, the study did not report the challenges of using AI in teaching and learning, posing the problem of positive publication bias.

Apart from their impact on academic achievement, AI tools facilitate individualized learning and increase learners' engagement (Kalra et al., 2026). Learners gain linguistic confidence and motivation when they use AI tools, as these tools improve the quality of their work through real-time feedback and personalized guidance (Thangthong et al. 2024; Waluyo & Kusumastuti, 2024). Moreover, using AI tools before class acts as a valuable preparation aid that helps students feel more confident, less anxious, and better prepared to participate in lessons (Boontong et al. 2025). In addition, Thongsan and Anderson (2025) found that learners showed awareness of bias in AI-generated content and raised evaluative questions when interacting with AI. This suggests that systematic integration of AI into pedagogy can also be useful in fostering learners' critical thinking and learner autonomy.

In general, studies reveal the increased use of AI in ELT and its significant pedagogical potential across various language skills. As educators have begun using GenAI, they show positive attitudes toward AI, recognizing its usefulness in daily routines such as writing tasks and generating ideas for high-level academic work (Kohnke & Ulla, 2024). However, they also worry about ethical concerns (Ulla et al., 2023), over-reliance on AI tools, which may hinder in-depth learning and critical thinking (Limna & Saengchart, 2025) and reduce spontaneous interactions with lecturers (Boontong et al. 2025). Learners also express ethical concerns, including plagiarism (Apridayani et al., 2025), information reliability (Tanharat & Phootirat, 2025), and potential reduction in creativity (Apridayani et al., 2025). Taken together, these opportunities and challenges suggest that educators must adapt their role as AI becomes increasingly integrated into language education. The educator's role should shift from a provider of information to a guardian of the learning experience, prioritizing human qualities that technology cannot

reliably replicate and guiding learners in the effective, ethical, critical use of AI tools (Montakantiwong, A., & Jitpaisarnwattana, 2026).

Waluyo and Kusumastuti (2024) used a mixed-methods approach to explore the perspectives on the use of AI in their teaching and learning of the students and teachers working in an English Department of a Thai university. The authors reported that the students showed positive attitudes towards AI tools. However, they also voiced their concerns about the overreliance of AI-generated content. From teacher perspectives, the study reported teachers were concerned about the challenges in using AI to assess students' learning progress in such a way that can promote independent learning as well as ethical issues such as academic integrity. The authors also recommend that AI tools should be integrated into the current curriculum in ways that complement traditional teaching methods. Similarly, Kalra et al. (2026) examined the impact of AI on Thai university teachers' teaching methodologies and learners' learning experiences. The analysis of data collected via semi-structured interviews and focus group showed positive results of the AI impact on student engagement, and their academic performance. Yet, the authors emphasized the need of balanced methodologies between AI-based pedagogies and traditional pedagogical practices in Thai universities.

Also, by using mixed-methods approach, Pinweha and Sapsirin (2026) examined the vocabulary size of Thai graduate students and their perceptions of how vocabulary knowledge influenced their use of AI in English language learning. The results were mixed with some students expressing positive views of AI on the growth of their vocabulary size, other suggesting no AI-supported effect on their vocabulary size. The limitation of this study lies in the reliance of students' self-reports via interviews.

Thadphoothon and Samrit (2025) conducted a classroom research study using questionnaires to explore Thai university students' use of AI to learn English vocabulary. The authors reported students' positive attitudes towards the use of AI in learning new words and practicing pronunciation, but the authors did not provide information about what pronunciation models were chosen and who decided which models were considered desirable or acceptable. Also, the study reported concerns about its reliability and the need for supplementary traditional learning methods.

Although the body of research on AI in ELT in Thai contexts is remarkably growing, comprehensive evaluations of scalability remain limited. The studies reported tensions in the use of AI for the purpose of improve learning outcomes and teachers and students' attitudes towards AI use. Methodologically, most of studies used qualitative methods such as interviews and focus group to collect the data whereas experimental studies tended to be conducted by the classroom teachers themselves. It is not clear how the

intervention was designed, and implemented, how confounding variables were controlled as most of these experiments were conducted in contact groups. One critical issue is that the impact of AI use on learners' learning outcomes as reported in the studies, this impact may be credited to the novelty effect. Without sufficient evidence of the long-term effects of AI-assisted learning on language skills, it is challenging to validate the effectiveness of these tools. The studies that employed a mixed-methods approach is still limited in number.

While some studies recommended that a balance between AI-based pedagogy and tradition teaching methodologies should be considered, the issue of how to integrate AI tools in traditional, human-centric teaching methodologies is still ignored. Despite this weakness, research on the use of AI in ELT in Thai educational contexts is of interest to researchers in other Southeast Asian countries.

Recommendations

The use of AI in ELT and research on its impact on learning outcome in Thailand are still in their early stages. The journey toward a mature and effective AI-enhanced ELT paradigm in Thailand demands a priority in developing a sound pedagogy that balances the traditional teaching and learning strategies with AI-supported teaching and learning strategies. By following this forward-looking research agenda, the Thai ELT community can move decisively beyond the current "technology as add on" or "technology as fashion" phenomenon toward a local sustainable AI-supported ELT pedagogy that is both innovative and culture-fit. For instance, when utilizing an AI chatbot to generate dialogue or correspondence, a teacher might design a collaborative activity where students critically analyze the AI's output for Western biases or inappropriate tones. The teacher can then guide the students in revising the text to reflect Thai cultural values, such as appropriate levels of politeness and respect for elders, thereby acting as a guardian of the learning experience. Additionally, the teacher could assign an AI writing assistant to provide immediate, routine feedback on students' grammatical errors. The teacher can then utilize the time saved from manual grading to conduct personalized, face-to-face coaching sessions, offering the emotional support, encouragement, and human interaction that AI cannot replicate. This ensures that the deeply respected, traditional role of the teacher as a mentor is preserved rather than replaced.

This forward-looking journey requires an awareness of the potential benefits of AI tools as well as a careful navigation of the inherent and situated challenges with a view to ensuring that AI tools are effectively integrated into the educational landscape. Such a journey must be supported with more

robust studies that focus on long-term effect of AI tools upon the teaching and learning of English as a global language in Thailand. Such studies should move beyond questionnaire- or interview-based surveys towards the adoption of a mixed-methods approach. Studies on how AI tools are used to complement and enhance the current curriculum rather than contradict or complicate it should be encouraged. In the same vein, studies on how teachers can find a middle ground between AI-based pedagogy and traditional teaching methods to preserve the teacher-student relationship, which is deeply rooted in Thai culture and other Asian cultures will be of great value.

Conclusion

As Cogo et al., (2024) have noted,

The pace of advancement in GenAI has been absolutely incredible. It could be argued that this exacerbates a tension which has always existed to some extent: that between the typical speed of academic output versus the typical speed of technological developments. As educators, we may well want to include technology in our classroom practice, but we also want this practice to be judicious, to be informed by research and reflection, and these things take time. In the case of GenAI, it seems the gap in the time it takes for the tech to advance and the time it takes for us to study it and share our learnings has become wider than ever.

(Cogo et al., 2024, p. 373-374)

AI has now been integral to human life and is transforming all spheres of human life including education. In ELT, AI offers both affordances and challenges. As a result, ethical and pedagogical cautions must be taken to approach the integration of AI in ELT. This is because research on the effect of generative AI tools on education in Thai educational contexts and beyond is still in its early stages and language instructors are still ‘finding their footing’. In both global and Thai ELT contexts, AI is perceived as an advantageous supplementary tool, specifically useful in developing EFL learners’ language abilities and affective factors such as motivation and engagement. It can also benefit EFL instructors in several ways, providing more chances to focus on high-impact tasks while allowing AI to do the repetitive ones. Despite the benefits, AI still has limitations, including the lack of AI policies and structured ethical guidelines, so that its use with greater integrity can encourage ethical and responsible practices. If it is widely used and users are either formally or informally trained, the benefits might outweigh the drawbacks in our society. In other words, AI in education in general and in ELT in particular should not be viewed simply from the technological

functionality perspectives but emphasis should be placed on the values, intentions, and consequences that underpin its use. As a practical contribution, future research must prioritize longitudinal, mixed-methods studies to evaluate the long-term effectiveness of AI tools beyond initial novelty effects. Furthermore, scholarly efforts should focus on designing balanced pedagogies that harmoniously integrate AI with the human-centric, traditional teacher-student relationships that are fundamental to Thai culture.

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References

- Abrar, M., Aboraya, W., Khaliq, R. A., Subramanian, K. P., Husaini, Y. A., Abdulla, M. (2025). Ai-powered learning pathways: Personalized learning and dynamic assessments. *International Journal of Advanced Computer Science and Applications*, 16(1), 454-462.
<https://doi.org/10.14569/ijacsa.2025.0160145>

- Alpika, S. A., Rachman, D., & Puspita, R. H. (2026). The role of Duolingo in developing students' listening skills: Students' voices. *Borneo Educational Journal (Borju)*, 8(1), 68–88.
- Apridayani, A., Wichaidith, A., & Doromae, R. (2025). ChatGPT for English writing: A qualitative inquiry among English major students at Thai higher education. *The New English Teacher*, 19(2), 72–87. <https://assumptionjournal.au.edu/index.php/newEnglishTeacher/article/view/8359>
- Boontong, N., Omanee, B., Phairot, E., & Khemanuwong, T. (2025). Social interaction between lecturers and undergraduates in EFL classrooms: A case study from a Thai university in the age of AI. *International Journal of Learning, Teaching and Educational Research*, 24(12), 43–65. <https://doi.org/10.26803/ijlter.24.12.3>
- Chaipidech, P., Srisawasdi, N., Kajornmanee, T., & Chaipah, K. (2022). A personalized learning system-supported professional training model for teachers' TPACK development. *Computers and Education: Artificial Intelligence*, 3, <https://doi.org/10.1016/j.caeai.2022.100064>
- Chumpavan, S., Boonyarattanasoontorn, P., McIver, S., & Tampanich, S. (2024). Using technology to enhance language learning in the digital era. *ESBB*, 10(2), 186–199.
- Cogo, A., Patsko, L., & Szoke, J. (2024). Generative artificial intelligence and ELT. *ELT Journal*, 78(4), 373–377. <https://doi.org/10.1093/elt/ccae051>
- Crompton, H., Edmett, A., Ichaporia, N. & Burke, D. (2024). AI and English language teaching: Affordances and challenges. *British Journal of Educational Technology*. 55. 2503-2529. <https://doi.org/10.1111/bjet.13460>
- Dennis, N. K. (2024). Using AI-powered speech recognition technology to improve English pronunciation and speaking skills. *LAFOR Journal of Education*, 12(2). <https://doi.org/10.22492/ije.12.2.05>
- Ekizer, F. N. (2025). Exploring the impact of artificial intelligence on English language teaching: A meta-analysis. *Acta Psychologica*, 260. <https://doi.org/10.1016/j.actpsy.2025.105649>
- Giray, L. (2024). Educators who do not use AI will be replaced by those who do: Disadvantages of not embracing AI in medical education. *Journal of the Practice of Cardiovascular Sciences*, 10(1), 43–47. https://doi.org/10.4103/jpcs.jpcs_19_24

- Holmes, W., Bialik, M. & Fadel, C. (2019). *Artificial intelligence in education: Promises and implications for teaching and learning*, Center for Curriculum Redesign.
- Ingvavara, T., Panjaburee, P., Srisawasdi, N., & Sajjapanroj, S. (2022). The use of a personalized learning approach to implementing self-regulated online learning. *Computers and Education: Artificial Intelligence*, 3. <https://doi.org/10.1016/j.caeai.2022.100086>
- Kalra, R., Siribud, S., & Donsomsakulkij, W. (2026). Enhancing academic outcomes: The role of AI-driven personalized learning in Thai higher education. *LEARN Journal: Language Education and Acquisition Research Network*, 19(1), 119–140. <https://doi.org/10.70730/FLKU5081>
- Kang, O., & Hirschi, K. (2025). Bias and stereotyping: Human and artificial intelligence (AI). *Annual Review of Applied Linguistics*, 45, 69–84. <https://doi.org/10.1017/S026719052500008X>
- Kusumawati, E., Solihati, N., & Sari, Z. (2025). Integration of web-based intelligent tutoring system (TuinLec) into text structure strategy to improve text strategy memory and reading comprehension skills. *International Journal of Learning, Teaching and Educational Research*. 24. 52-71. <https://doi.org/10.26803/ijlter.24.4.3>
- Khampusaen, D. (2025). The impact of ChatGPT on academic writing skills and knowledge: An investigation of its use in argumentative essays. *LEARN Journal: Language Education and Acquisition Research Network*, 18(1), 854–877.
- Kohnke, L., Moorhouse, B. L., & Zou, D. (2023). Exploring generative artificial intelligence preparedness among university language instructors: A case study. *Computers and Education: Artificial Intelligence*, 5. <https://doi.org/10.1016/j.caeai.2023.100156>
- Kohnke, L., & Ulla, M. B. (2024). Embracing generative artificial intelligence: The perspectives of English instructors in Thai higher education institutions. *Knowledge Management & E-Learning*, 16(4), 653–670. <https://doi.org/10.34105/j.kmel.2024.16.030>
- Kristiawan, D. Y., Bashar, K., & Pradana, D. A. (2024). Artificial intelligence in English language learning: A systematic review of AI tools, applications, and pedagogical outcomes. *The Art of Teaching English as a Foreign Language (TATEFL)*, 5(2), 207–218. <https://doi.org/10.36663/tatefl.v5i2.912>
- Lai, W. Y. W., & Lee, J. S. (2024). A systematic review of conversational AI tools in ELT: Publication trends, tools, research methods, learning

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- outcomes, and antecedents. *Computers and Education: Artificial Intelligence*, 7. <https://doi.org/10.1016/j.caeai.2024.100291>
- Liakina, N. & Liakin, D. (2023). Speech technologies and pronunciation training: What is the potential for efficient corrective feedback?. In U. Kickhöfel Alves & J. Alcantara de Albuquerque (Ed.), *Second Language Pronunciation: Different Approaches to Teaching and Training*, (pp. 287-312). De Gruyter Mouton. <https://doi.org/10.1515/9783110736120-011>
- Limna, P., & Shaengchart, Y. (2025). Generative AI as an English writing aid: Thai university students' perceptions and experiences with ChatGPT and Gemini. *Suranaree Journal of Social Science*, 19(3). <https://doi.org/10.55766/sjss279466>
- Luckin, R., & Cukurova, M. (2019). Designing educational technologies in the age of AI: A learning sciences-driven approach. *British Journal of Educational Technology*, 50(6), 2824–2838. <https://doi.org/10.1111/bjet.12861>
- Montakantiwong, A., & Jitpaisarnwattana, N.(2026) Humanising language teaching in the age of AI. *PASAA*, 72(1), 1-18. <https://digital.car.chula.ac.th/pasaa/vol72/iss1/1>
- Meniado, J. C., Huyen, D. T. T., Panyadilokpong, N. & Lertkomolwit, P. (2024). Using ChatGPT for second language writing: Experiences and perceptions of EFL learners in Thailand and Vietnam. *Computers and Education: Artificial Intelligence*, 7. <https://doi.org/10.1016/j.caeai.2024.100313>
- Mepo, B., & Rigia, P. (2025). Emerging trends in ELT: AI tools for teaching and learning English. *International Journal of ELT, Linguistics and Comparative Literature*, 13(1).
- Özçelik, N. P. (2025). Artificial intelligence in English language teaching: A systematic analysis of global trends. *International Journal of Curriculum and Instruction*, 17(2), 612-626. <https://ijci.net/index.php/IJCI/article/view/1580>
- Özdere, M. (2025). AI in academic writing: Assessing the effectiveness, grading consistency, and student perspectives of ChatGPT and You.com for EFL students. *International Journal of Technology in Education*, 8(1), 123–154. <https://doi.org/10.46328/ijte.1001>
- Pinweha, S., & Sapsirin, S. (2026). Vocabulary size of Thai graduate students in different disciplines and their opinions of its influences on the use of AI in English language learning. *LEARN Journal: Language*

- Pitukwong, K., & Saraiwang, S. (2024). Exploring the effectiveness of digital writing tools on Thai EFL students' writing. *Contemporary Educational Technology*, 16(3). <https://doi.org/10.30935/cedtech/14808>
- Pokrivčáková, S. (2019). Preparing teachers for the application of AI-powered technologies in foreign language education. *Journal of Language and Cultural Education*, 7(3), 135–153. <https://doi.org/10.2478/jolace-2019-0025>
- Raungsawat, N., Saengroongpetch, S., & Kamsuriya, N. (2025). The role of artificial intelligence (AI) in EFL classrooms. *The Journal of Liberal Arts*, 25(2), 641–668. <https://doi.org/10.64731/jla.v25i2.283658>
- Ramakrishnan, S., Bishnoi, M. M., Joghee, S., Jijitha, S., & Kumar, A. (2024). Social engineering: Role of Teachers in cohabitation of AI with education. *2024 2nd International Conference on Cyber Resilience (ICCR)*, (pp. 1-6). <https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=10532897&isnumber=10532778>
- Rudik, I., & Ter-Grygorian, M. (2025). Generative AI and the future of English as a lingua franca in global business communication. *Folium*, 7, 200–208. <https://doi.org/10.32782/folium/2025.7.29>
- Sahdrina, S., Erlindawaty, E., & Adinda, A. (2024). EFL teachers' perspective on the implementation of AI in ELT setting. *Jurnal Riset Ilmu Pendidikan*, 4(4), 268–276.
- Silor, A. C., & Silor, F. S. C. (2025). Boosting reading comprehension through AI-based learning tools. *International Journal of Learning, Teaching and Educational Research*, 24(9), 61–79. <https://doi.org/10.26803/ijlter.24.9.4>
- Songsiengchai, S. (2025). Implementation of artificial intelligence (AI): Chat GPT for effective English language learning among Thai students in higher education. *International Journal of Education & Literacy Studies*, 13(1), 302-312). <http://dx.doi.org/10.7575/aiac.ijels.v.13n.1p.302>
- Syafei, M., & Nuraeningsih N. (2025). Leveraging artificial intelligence in writing: ELT students' perspectives and experiences. *International Journal of Learning, Teaching and Educational Research*, 24(5), 416–430. <https://doi.org/10.26803/ijlter.24.5.22>
- Szabó, F., & Szoke, J. (2024). How does generative AI promote autonomy and inclusivity in language teaching? *ELT Journal*, 78(4), 478–488. <https://doi.org/10.1093/elt/ccae052>

- Tanharat, N., & Phootirat, P. (2025). Integrating generative AI in EFL academic writing: Thai English-major students' purposes, perceptions, and experiences with ChatGPT. *rEFLections*, 32(3), 1891–1916. <https://doi.org/10.61508/refl.v32i3.285982>.
- Thangthong, P., Phiromsombut, J., & Imsa-ard, P. (2024). Navigating AI writing assistance tools: Unveiling the insights of Thai EFL Learners. *THAITESOL Journal*, 37(1), 111–131. <https://so05.tci-thaijo.org/index.php/thaitesoljournal/article/view/270168>
- Thadphoothon, J. ., & Samrit, J. (2025). The use of artificial intelligence (AI) application for vocabulary learning among Thai university students: A case study. *Journal of MCU Nakhondhat*, 12(1), 112–122. <https://so03.tci-thaijo.org/index.php/JMND/article/view/280517>
- Thongsan, N. C., & Anderson, N. J. (2025). From passive answers to active inquiry: How AI supports critical reading in EFL classrooms. *LEARN Journal: Language Education and Acquisition Research Network*, 18(1), 860–884. <https://doi.org/10.70730/KMKL8505>
- Tolstykh, O. M., & Oshchepkova, T. (2024). Beyond ChatGPT: Roles that artificial intelligence tools can play in an English language classroom. *Discover Artificial Intelligence*, 4(1). <https://doi.org/10.1007/s44163-024-00158-9>
- Tuong, N. K., & Dan, T. C. (2024). A Study on Duolingo mobile applications to improve EFL students' listening comprehension performances. *European Journal of Alternative Education Studies*, 9(1).
- Ulla, M. B., Perales, W. F., & Busbus, S. O. (2023). 'To generate or stop generating response': Exploring EFL teachers' perspectives on ChatGPT in English language teaching in Thailand. *Learning: Research and Practice*, 9(2), 168–182. <https://doi.org/10.1080/23735082.2023.2257252>
- Xie, Y., Wu, S., & Chakravarty, S. (2023). AI meets AI: Artificial intelligence and academic integrity—a survey on mitigating AI-assisted cheating in computing education. *Proceedings of the 24th annual conference on information technology education*, (pp. 79-83). <https://doi.org/10.1145/3585059.3611449>
- Waluyo, B., & Kusumastuti, S. (2024). Generative AI in student English learning in Thai higher education: More engagement, better outcomes? *Social Sciences & Humanities Open*, 10, 1–23. <https://doi.org/10.1016/j.ssaho.2024.101146>

- Warman, L. A. D., Erlinda, S., Tashid, T., Karpen, K., & Fatdha, T. S. E. (2023). Empowering introvert students: How artificial intelligence applications enhance speaking ability. *Al-Ishlah: Jurnal Pendidikan*, 15(4), 4801–4813. <https://doi.org/10.35445/alishlah.v15i4.4435>
- Yadav, R. R., Gupta, A., Pandey, P. A., Pandey, A., & Wavhal, S. (2025). A study of applications of artificial intelligence. *International Journal of Research and Scientific Innovation (IJRSI)*, 12(7), 782-786. <https://doi.org/10.51244/IJRSI.2025.12040067>
- Yuan, H. (2025). Artificial intelligence in language learning: Biometric feedback and adaptive reading for improved comprehension and reduced anxiety. *Humanities and Social Sciences Communications*, 12(566). <https://doi.org/10.1057/s41599-025-04878-w>
- Zheng, L., Niu, J., Zhong, L., J.F. Gyasi, J. F. (2021). The effectiveness of artificial intelligence on learning achievement and learning perception: A meta-analysis. *Interactive Learning Environments*, 31(9), 5650-5664. <https://doi.org/10.1080/10494820.2021.2015693>
- Ziesche, S., & Kumar Bhagat, K. (2022). *State of the education report for India, 2022: artificial intelligence in education; here, there and everywhere*. UNESCO.