



TINJAUAN SISTEMATIS ALAT BANTU AI PERCAKAPAN DALAM PENGAJARAN BAHASA INGGRIS (ELT)

A SYSTEMATIC REVIEW OF CONVERSATIONAL AI TOOLS IN ENGLISH LANGUAGE TEACHING (ELT)

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Abstract

Artificial Intelligence (AI) has quickly become an element of English Language Teaching (ELT), especially in conversation-focused instruction. This study identifies abilities improved by AI, investigates implementation variables and problems, and investigates the effects of AI on cognitive and emotional elements of ELT. A systematic literature review (SLR) and the PRISMA methodology are the methods we use to assess AI's contribution to ELT. The findings show that writing, grammar, pronunciation, and cultural competency all increase when AI is used in ELT. The results of this study indicate that the growth of ELT learning is significantly impacted by the usage of AI, which further promotes self-directed learning (chatbot). Cognitively, using chatbots may boost students' potential to the fullest extent possible and offers learning with the same true power as studying with native speakers. This also can help students feel less anxious when they first begin studying ELT and increase their motivation since they constantly give them real-time feedback, which helps students become more aware of and eager to learn more rapidly. The need for more rigorous experimental designs and the dearth of diversity in research are further challenges. This research emphasizes the significance of getting ready for the incorporation of AI into ELT in order to optimize the advantages of this technology. Also mentioned are ethical concerns that need more research, such as data privacy and possible prejudice in AI algorithms. This research focuses on implementation challenges while demonstrating the disruptive potential of AI in English Language Teaching (ELT). Long-term impacts should be investigated in future studies, incorporate advanced AI techniques, and assess larger contexts. The findings enhance our understanding of how AI can revolutionize language education by creating engaging and interactive learning environments that benefit both educators and learners.

Keywords : Conversational AI, English Language Teaching (ELT); Cognitive Outcomes, Emotional Learning, Chatbots

Abstrak

Kecerdasan Buatan (AI) dengan cepat menjadi elemen dalam Pengajaran Bahasa Inggris (ELT), terutama dalam pengajaran yang berfokus pada percakapan. Penelitian ini mengidentifikasi kemampuan yang ditingkatkan oleh AI, menyelidiki variabel dan masalah implementasi, dan menyelidiki efek AI pada elemen kognitif dan emosional ELT. Tinjauan literatur sistematis (SLR) dan metodologi PRISMA adalah metode yang kami gunakan untuk menilai kontribusi AI terhadap ELT. Temuan menunjukkan bahwa kemampuan menulis, tata bahasa, pengucapan, dan kompetensi budaya meningkat ketika AI digunakan dalam ELT. Hasil penelitian ini menunjukkan bahwa pertumbuhan pembelajaran ELT secara signifikan dipengaruhi oleh penggunaan yang disebut AI yang lebih jauh mempromosikan pembelajaran mandiri (chatbot). Secara kognitif, penggunaan chatbot dapat meningkatkan potensi siswa semaksimal mungkin dan menawarkan



pembelajaran dengan kekuatan yang sama seperti belajar dengan penutur asli. Hal ini juga dapat membantu siswa merasa tidak terlalu cemas saat pertama kali mulai belajar bahasa Inggris sebagai bahasa asing dan meningkatkan motivasi mereka karena mereka terus menerus mendapatkan umpan balik secara real-time, yang membantu siswa menjadi lebih sadar dan bersemangat untuk belajar dengan lebih cepat. Kebutuhan akan desain eksperimen yang lebih ketat dan kurangnya keragaman dalam penelitian merupakan tantangan lebih lanjut. Penelitian ini menekankan pentingnya bersiap-siap untuk penggabungan AI ke dalam ELT untuk mengoptimalkan keunggulan teknologi ini. Disebutkan juga masalah etika yang membutuhkan lebih banyak penelitian, seperti privasi data dan kemungkinan prasangka dalam AI.

Kata Kunci : AI Percakapan, Pengajaran Bahasa Inggris (ELT); Hasil Kognitif, Pembelajaran Emosional, Chatbots

INTRODUCTION

Research on the use of artificial intelligence (AI) in English language teaching (ELT) has become crucial, especially in light of its effects on language learning results. A literature study by *Asriyanti et al. (2024)* found that AI tools like chatbots and speech recognition greatly improve students' confidence, motivation, and English communication abilities. The study highlights how programs like Duolingo and QuillBot offer individualized and adaptive learning experiences essential for successful language acquisition. But it also highlights issues like unequal access to technology and moral dilemmas with data privacy.

AI technologies are being increasingly incorporated into English Language Teaching (ELT) to enhance learning outcomes and foster collaboration. As noted by *Abimanto and Mahendro (2023)*, the incorporation of AI in language learning greatly enhances students' speaking, listening, reading, and writing abilities. This aligns with the findings of *Yang (2024)*, who highlighted that AI-based tools not only enhance language proficiency but also boost student motivation and self-directed learning. AI tools, including chatbots, virtual tutors, and speech recognition systems, deliver a customized learning journey by adjusting content to fit individual requirements and providing immediate feedback on pronunciation, grammar, and vocabulary use. Furthermore, these tools establish a non-critical atmosphere for practicing conversational abilities, aiding learners in overcoming the anxiety associated with speaking.

Several studies projects have pointed out the efficiency of AI in improving language abilities, especially in English Language Teaching (ELT). For example, *Subiyantoro et al. (2023)* underlined that AI tools, like virtual tutors and chatbots, have changed teaching and learning methods by allowing real-time communication with native speakers. These interactions not only enhance students' speaking skills but also significantly increase their confidence in using the language. In a similar vein, a study conducted by *Qiao and Zhao (2023)* showed that AI-driven instruction utilizing resources such as Duolingo effectively improves speaking abilities and encourages self-regulation among students. The individualized feedback and engaging exercises offered by these tools enable learners to practice in a relaxed setting, fostering autonomy and motivation. By offering adaptive learning settings customized to individual requirements, AI promotes engagement, motivation, and self-regulated learning techniques. As recent studies has emphasized, the inclusion of AI in ELT not only boosts linguistic proficiency but also supports learner independence and confidence, establishing it as an essential tool for contemporary language teaching. This study explicitly examines conversational AI tools and their impact on cognitive and emotional learning outcomes in ELT, in contrast to earlier research that concentrated on generic AI applications in education. Two key questions are intended to be addressed by this study: (1) What abilities or facets of language learning are most successfully enhanced by conversational AI systems (2) How do they affect cognitive and emotional learning outcomes in English Language Teaching (ELT)?.



LITERATURE REVIEW

1. AI Technology in English Education

The application of technology, alongside artificial intelligence (AI) in particular, has evolved greatly regarding English education (Rose et al., 2021). AI, as a branch of computer science that works on the automation of cognitive applications, has great promise in enhancing the language learning process (Huang, Hew, & Fryer, 2022). Lee, Jeon, and Choe (2024) argue that technology can be integrated into two main approaches within the Global English Language Teaching (GELT) methodology approach in two primary ways: fostering communication in English as a Lingua Franca (ELF) and promoting the perception of diversity in English.

This statement is especially important with regard to the contemporary use of technology in GELT because it emphasizes that technology can shift the mindset of English users as to what English is, who owns it, and how it can be used (Rose & Galloway, 2019). Therefore, applying AI technologies in teaching the English language goes beyond the adoption of sophisticated devices. It requires a new appreciation of the differences of English in the contemporary world.

2. AI Conversation in English Teaching

The goal is to illustrate how these studies are related, and how they have contributed to our understanding of the possibilities of AI chatbots in English language teaching. We hope that by discussing this issue in a simple and direct manner, we will be able to create greater interest and awareness of this subject. It also enables us to target gaps that need more attention and how AI chatbots can be harnessed to enhance English learning achievement. According to Satiti, Fauziati, and Seytaningsih (2024), AI chatbots provide a modern response to the problem of English language teaching for college students.

They discovered that chatbots assist not only in enhancing language skills, but also in delivering easier and better learning opportunities to the students. Furthermore, it can also provide quick and relevant feedback, helping students to identify and correct their mistakes more effectively. These findings are in line with a study by Sol et al. (2024) in Cambodia, which showed that students had a positive view towards the use of AI in language learning. AbuSahyon et al. (2022) added that AI chatbots can provide personalized feedback, flexible learning paths, and opportunities to interact in real language, thus increasing motivation and learning independence. Thus, AI chatbots have the potential to change the way we learn languages, especially in this digital age.

METHOD

This study uses a systematic literature review (SLR) to examine the function of conversational AI in English language teaching (ELT). The review followed the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) standards to guarantee a thorough and open procedure.

1. Description of Sample

The process of study selection adhered to a systematic method to guarantee the inclusion of pertinent and high-quality research. Articles that underwent peer review and were published between 2020 and 2025 were chosen to reflect the latest advancements in conversational AI tools, such as chatbots and virtual tutors, in the context of English Language



Teaching (ELT). For studies to qualify, they needed to be written in English, available in full-text format, and concentrate on either cognitive or affective learning outcomes or implementation challenges associated with conversational AI in ELT. These criteria ensured that the review considered both the educational effects and practical aspects of utilizing AI tools in language instruction. Studies that were not related to conversational AI, existing literature reviews or meta-analyses that failed to provide original research findings, and articles lacking full-text access were excluded to preserve the review's focus and thoroughness. This stringent selection process guaranteed that only studies directly relevant to the research aims were included, offering a comprehensive insight into how conversational AI influences ELT while emphasizing possible challenges and areas for further investigation.

2. Procedure

Thorough and systematic method was used to synthesize the results of the selected studies, with the PRISMA flowchart monitoring each step of the study selection process from initial identification to final inclusion (*Moher et al., 2009*). Data extraction was performed using a designated journal to collect pertinent information, including study design, sample characteristics, conversational AI tools used, cognitive and affective outcome measures, and implementation difficulties (*Page et al., 2021*). The analyzed data were examined to assess the influence of conversational AI on learning outcomes such as language proficiency, motivation, and engagement, as well as to identify recurring themes in implementation difficulties (*Subiyantoro et al., 2023*). Finally, the findings were synthesized thematically to provide a thorough summary of the research landscape, with key findings and trends organized into overarching themes to formulate a narrative synthesis that addresses the research questions and provides valuable insights for educators, researchers, and policymakers in the field of ELT (*Abimanto and Mahendro, 2023*).

3. Study Selection Criteria

This review aims to explore recent empirical research on the use of artificial intelligence (AI) in English language teaching (ELT). Inclusion criteria include: 1) articles indexed in reputable databases (Scholar, Web of Science, Mendeley); 2) Articles published between 2020 and 2024; 3) Articles written in English; 4) Articles available in full-text format; and 5) Original research articles published in peer-reviewed venues. Exclusion criteria included: 1) studies that did not focus on AI in language learning; 2) articles published before 2020; 3) studies that did not address variables related to English language learning; and 4) articles that were reviews or meta-analyses.

A comprehensive search of several databases was conducted to conduct this evaluation, including keyword combinations such as "*conversational AI*", "*ELT*", "*cognitive outcomes*", and "*affective outcomes*". The potential of conversational AI technologies to promote inclusive English language learning is also considered in this study. For example, AI chatbots can help students who struggle with social interaction, algorithms can provide individualized feedback based on each learner's needs, and speech recognition technology can assist with pronunciation instruction. By providing adaptive and personalized learning experiences, these applications



demonstrate how AI not only improves student engagement, but also enables students to reach their full potential.

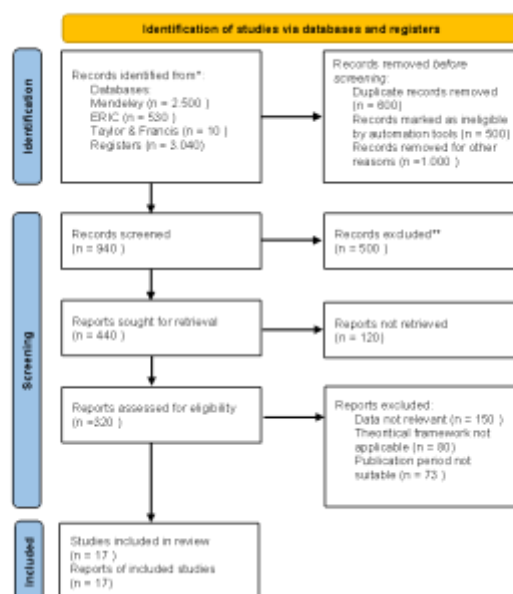


Figure 1. PRISMA Flowchart of the selection process

RESULT AND DISCUSSION

1. Result

Summarize the collected data, evaluate and interpret them. Provide clear arguments supported by appropriate theories and methods.

Table 1

An overview and features of the chosen final studies

N o	Authors	Country	Mean Characteristi c	Variable	Study Design	Measure	Finding
1.	Subiyantoro et al. (2023)	Indonesia	95 first-year university students participating in chatbot-assisted English learning	Speaking skills, Confidence, Motivation	Systematic Review	Real-time interaction with native speakers, Analysis of speaking skills improvement	AI enhances speaking skills and confidence through direct interaction with native speakers.
2.	Qiao & Zhao (2023)	China	120 university students using Duolingo and other AI-based tools	Speaking abilities, Self-regulation	Experimental	Individualized feedback, Adaptive exercises	AI promotes self-directed learning and increases student motivation through personalized feedback.
3.	AbuSahyon et al. (2022)	Saudi Arabia	150 EFL learners from various	Personalized feedback, Flexible	Cross-sectional	Adaptive feedback based on	Chatbots provide flexible



			institutions exploring chatbot- based language learning	learning paths.		student needs	learning paths and enhance student motivation and independenc e
4.	Sol et al. (2024)	Cambodi a	200 university students surveyed on their perceptions of AI tools in English learning	Student engagement , motivation	Survey	Survey of student perception of AI tools	Students have a positive view of AI use in English language learning.
5.	Satiti et al. (2024)	Indonesi a	95 first-year university students using chatbots for English	Language skilss, Learning opportunitie s	Case Study	Rapid and relevant feedback, Identificatio n of student errors	Chatbots help improve language skilss and provide easier learning opportunitie s for collage students.

2. Discussion

a. Enhancing Language Acquisition and Engagement through Conversational AI in ELT

This systematic review investigated the use of conversational AI tools, particularly chatbots, in English Language Teaching (*ELT*). The overarching aim was to synthesize findings on how these tools improve language learning, considering implementation factors and the cognitive and emotional effects on learners. Studies reveal the potential of chatbots to enhance writing, grammar, pronunciation, and cultural competence, while also personalizing learning experiences. This resonates with Constructivist Learning Theory, highlights that students actively construct knowledge rather than passively absorbing it (*Piaget, 1950*). By engaging in interactive conversations and receiving tailored feedback, students construct their own understanding of the English language.

The effectiveness of conversational AI in fostering language acquisition can also be understood through *Vygotsky's Zone of Proximal Development* (*Vygotsky, 1978*). Chatbots can act as a "*more knowledgeable other*" by providing support and guidance that is just beyond the learner's current capabilities, thereby facilitating their progress and development. Through scaffolding and personalized assistance, chatbots enable learners to tackle increasingly complex tasks and achieve mastery in English language skills. Furthermore, the non-judgmental nature of chatbot interactions creates a safe space for experimentation and error correction, which is essential for effective language learning.



In conversational AI tools, according to *Connectivism*, allow students to connect with diverse resources and communities. They extend learning beyond the traditional classroom environment (*Siemens, 2005*). Chatbots improve learners' communication skills and cultural awareness by giving them access to native speakers, authentic materials, and real-world language contexts. A better understanding of the English language and its role in global communication is fostered by this interconnection. It also helps students become more independent and learn more on their own.

b. Personalization and Motivation in Conversational AI-Driven ELT

Conversational AI's success is also rooted in its ability to deliver individualized, flexible educational experiences. According to *Deci and Ryan (1985)*, the Self-Determination Theory places a strong emphasis on the value of autonomy, competence, and relatedness in promoting intrinsic motivation. Chatbots are used in more than only language instruction in English language teaching learning (ELT) to include helping students become more culturally sensitive, cross-culturally competent, and globally conscious (*Anis & Scholar, 2023*). This offers state-of-the-art resources and platforms that support fruitful cross-cultural interactions as well as comprehensive knowledge of many cultures and viewpoints. As they interact with AI-powered resources, learners are exposed to authentic cultural materials, engaging language exchanges, and virtual interactions that replicate in-person intercultural relationships (*Karakas, 2023*). Students can gain empathy, flexibility, and knowledge of many cultural customs and viewpoints. Furthermore, the curriculum of AI language learning systems include cultural content, exposing pupils to real materials like movies, books, and articles from other cultures. Also chatbots can support autonomy by allowing learners to choose their learning paths and set their own goals. They enhance competence by providing targeted feedback and opportunities for practice.

Moreover, the use of conversational AI in ELT aligns with principles of Cognitive Load Theory (*Sweller, 1988*). By automating routine tasks and providing on-demand support, chatbots can reduce extraneous cognitive load, freeing up learners' mental resources to focus on meaningful learning activities. This is particularly beneficial for novice learners who may struggle with the complexities of English grammar and vocabulary. Conversational AI tools can provide scaffolding and support that allows learners to gradually master these concepts without becoming overwhelmed.

Chatbots also contribute to fostering a growth mindset, as described by Dweck's Mindset Theory (*Dweck, 2006*). By providing encouragement and celebrating progress, they can help learners view challenges as opportunities for growth, rather than as indicators of fixed ability. This is particularly important for language learners who may experience setbacks and frustrations along the way. Conversational AI tools can provide the support and encouragement needed to persist in the face of difficulties and achieve their language learning goals.

c. Ethical Considerations and Future Research

While conversational AI offers significant benefits, it's crucial to address ethical challenges. Critical Pedagogy, as advocated by Freire (*1970*), reminds us to critically evaluate



AI outputs and ensure that they promote equity and social justice. It's crucial to avoid biases in AI algorithms and ensure that these tools are used to empower learners rather than perpetuate inequalities. In order to ensure that these technologies are utilized to advance inclusion, fairness, and social justice for all learners, future research should concentrate on the appropriate and ethical application of conversational AI in ELT.

Additionally, the use of conversational AI tools in ELT should be guided by principles of Universal Design for Learning, which emphasizes the importance of providing multiple means of representation, action and expression, and engagement to accommodate diverse learner needs (*Rose & Meyer, 2002*). By offering a variety of modalities, levels of support, and opportunities for interaction, conversational AI chatbots can cater to the diverse learning styles and preferences of students, ensuring that all learners have the opportunity to succeed.

The theoretical framework of Activity Theory (*Vygotsky, 1978*) also provides valuable insights into understanding the complex interplay of factors that influence the effectiveness of conversational AI in ELT. According to Activity Theory, learning is not simply a cognitive process but rather a situated activity that is shaped by the interactions between the learner, the tools they use, the social context, and the broader cultural environment. Therefore, future research should examine how conversational AI tools are integrated into specific ELT activities, how they mediate interactions between learners and teachers, and how they contribute to the overall goals of the learning community.

KESIMPULAN

Conversational AI tools have proven transformative in English Language Teaching (ELT), offering substantial improvements in cognitive and emotional learning outcomes. The technology is particularly effective in improving core language skills such as speaking, writing, grammar, vocabulary acquisition, and pronunciation by providing adaptive and personalized learning experiences tailored to individual needs (*Abimanto & Mahendro, 2023*). By providing real-time feedback and fostering a non-critical environment for practice, conversational AI encourages learner autonomy, self-regulation, and confidence in using language (*Yang, 2024*).

Moreover, it increases engagement and motivation through interactive exercises and customized challenges, thus creating an immersive learning experience (*Asriyanti et al., 2024*). On the emotional side, conversational AI reduces anxiety associated with speaking and supports emotion regulation by offering empathetic feedback mechanisms. However, despite its clear benefits, challenges such as unequal access to the technology, ethical concerns regarding data privacy, and algorithmic biases hinder its widespread adoption (*Asriyanti et al., 2024*). In addition, the lack of diversity in research and the need for more rigorous experimental designs limit the understanding of long-term impact. To optimize the advantages of this technology in ELT, future studies should tackle these issues while investigating cutting-edge AI methods and their use in various educational settings.

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