



RESEARCH PAPER

Adaptation of Generative-AI Technologies for Teaching and Learning: Innovative Practices and Challenges from the Global Perspective

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ABSTRACT

Generative AI technologies have advanced rapidly to bring fundamental improvements to English Language Teaching (ELT). ChatGPT, along with Grammarly and ELSA Speak tools. The present research aims to examine how Generative AI operates within ELT programs while evaluating its functional enhancements and obstacles and forecasting proper usage guidelines. A PRISMA guideline serves as the methodological approach to analyze peer-reviewed articles and case studies, and empirical studies published between 2018 and 2024. The review provides the results that integrated generation of essential content by AI results in better achievement of students through instant feedback and automated grammar checks and interactive conversation practice, and adaptive vocabulary learning features. These tools enable self-learning capabilities, but their computer systems engage students in education while running teacher-administrative tasks automatically. Moreover, the adoption of Generative AI is hindered by three main problems, including questions about content quality and data privacy constraints, algorithmic biases, and the inability to overcome digital disparities. Research results recommend that educational administrators and teachers who intend to introduce Generative AI in English Language Teaching sessions. Furthermore, educational organizations and policy agencies, and research institutions can use these research results to successfully integrate artificial intelligence technology in their teaching practices.

KEYWORDS Generative AI, English Language Teaching, Adaptive Learning, AI-Powered Tools, Pedagogy, Ethical AI Integration

Introduction

Educational technologies are defined as generative Artificial Intelligence (AI), which marked a new evolution of the approaches used in this field. Using more complex models, including Generative Pre-trained Transformer (GPT) and Bidirectional Encoder Representations from Transformers (BERT), generative AI also allows for the generation of on-demand responses and personalized content, as well as more engaging learning possibilities. These systems utilize deep learning and natural language processing skills to mimic human interaction efficiently, making them qualitatively suitable for the educational field, particularly for ELT. English is undoubtedly one of the most widely spoken languages worldwide and serves as a key to bridging people, continents, and promoting essential aspects such as business development and educational achievements. English Language Teaching (ELT) is therefore central to education, and approximately millions of learners want to learn the language for various Personal, academic, and Professional

reasons (Ejaz & Jamil, 2024). Moreover, technological improvement has revolutionized traditional ELT approaches and tools by including new technologies such as CALL (Computer-Assisted Language Learning) and MALL (Mobile-Assisted Language Learning). These developments are complemented in generative AI to provide solutions to some common problems like engagement, accessibility, and individualization. AI language learning products like ChatGPT and Grammarly are changing the face of language learning through automatically adaptive feedback, real-time error checking, and a rich Language learning experience. Apart from improving learning experiences, the results also indicated how these tools can help teachers plan optimally and implement mainstreamed solutions (Lo et al., 2024). Furthermore, integrating generative AI and ELT is a revolutionary concept in teaching that will help deliver personalized lesson plans and encourage learners' interest in various learning environments.

Material and Methods

The present research depends on a systematic literature review methodology to evaluate the status of Generative AI within English Language Teaching (ELT). A deliberate approach produces extensive evidence-based evaluations that present unbiased findings regarding how AI tools affect English Language Teaching, together with their applications and benefits, along with the identified challenges. The PRISMA framework enables selection research by providing a method that supports valid analysis of previously conducted studies. High-quality research studies must always be included in PRISMA review assessments through the framework's system that eliminates bias from the selection process. The assessment of AI involvement in writing and speaking development and grammar and vocabulary education relies on quantitative and qualitative synthesis procedures to gather both empirical data and theoretical frameworks and case study evidence. The effects of AI in ELT receive systematic evaluation through the use of the SAMR model and TPACK framework as pedagogical frameworks (Moorhouse & Kohnke, 2024). The tools enable evaluation of when AI elements function beyond teaching basics to create substantial learning advancements.

The PRISMA study selection process included four sequential stages for systematic analysis. The research utilized Scopus, along with Web of Science and Google Scholar, and also included SpringerLink and ERIC. Boolean search operators with the terms "Generative AI in ELT," "ChatGPT for language learning," and "AI-powered writing assistance in ELT" were used as keywords in this research to locate suitable studies. A process to eliminate duplicate records began, followed by relevance screening of studies focusing on Generative AI in ELT (Lee et al., 2025). A full-text review of articles was conducted to confirm their eligibility through a criteria assessment. Qualitative and quantitative synthesis involved 50 research studies of high impact. The research team provided the complete set of criteria for study selection in Table 1.

Table 1
Inclusion and Exclusion Criteria for Study Selection (Author's own work)

Criteria	Inclusion	Exclusion
Publication Year	Studies published between 2018 and 2024	Studies published before 2018
Peer Review	Peer-reviewed journal articles, empirical research	Non-peer-reviewed sources (blogs, reports, etc.)
Relevance	Focuses on Generative AI applications in ELT	Studies discussing AI without a focus on ELT
Empirical Data	Provides quantitative or qualitative findings	Lacks empirical validation or clear methodology

The analysis commenced with 200 studies, but screening reduced this number to 50 final studies for consideration. A PRISMA flow diagram in Figure 1 shows how researchers chose and selected the assessable studies for final review.

Databases searched: Scopus, web of science, Google scholar, Springer

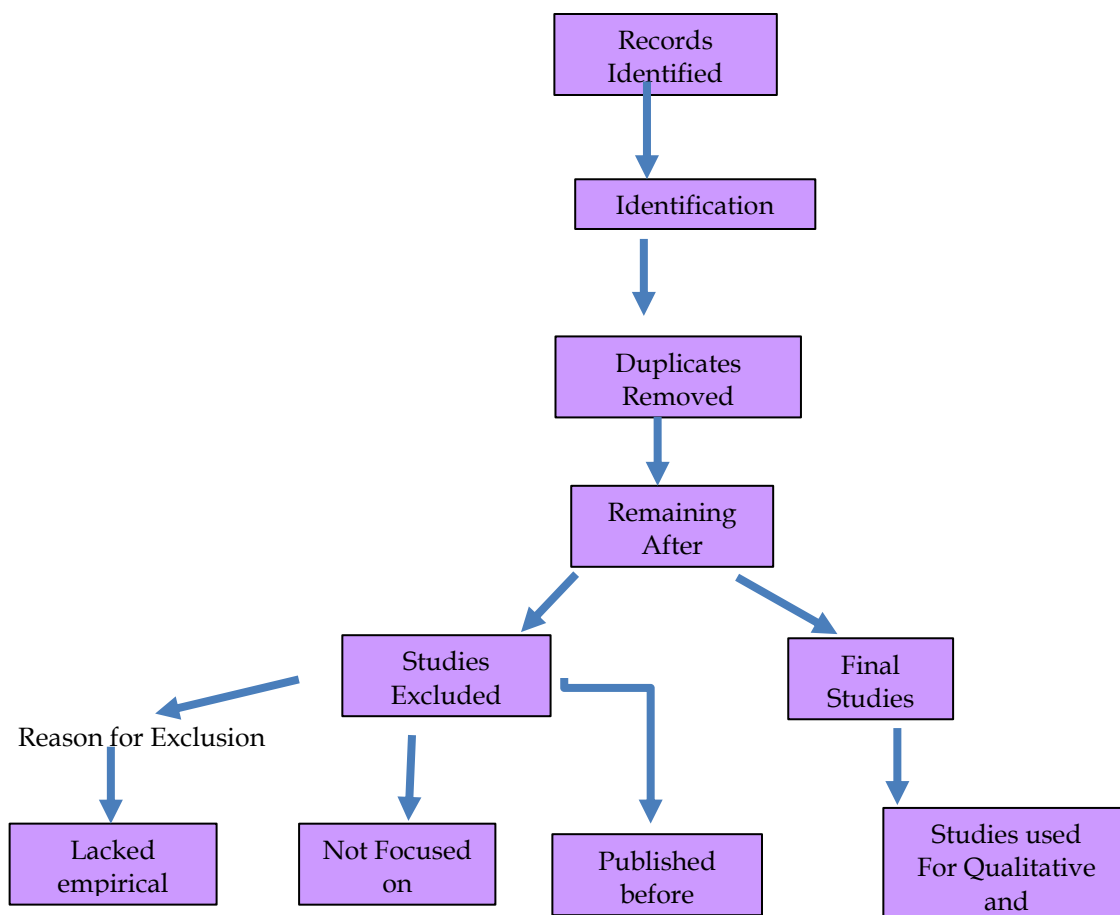


Figure 1. PRISMA Flow Diagram for Study Selection (Author's own work)

The research evaluated how effectively AI technology functions in ELT domains while determining three central concepts about AI learning tools and integration barriers and AI ELT developments for the future (Bhatti, Iqbal, & Abbas, 2021). The research used data triangulation to maintain a reliable approach by confirming results through multiple sources, which included academic literature and case studies, and empirical research studies. A classification system presented in Table 2 is used to categorize AI applications within ELT, distinguishing their effects on writing skills and speaking skills as well as vocabulary development and grammar mastery.

Table 2
Key Areas of AI Integration in ELT (Author's own work)

AI Application	Examples	Pedagogical Impact
Writing Assistance	Grammarly, ChatGPT, AI essay evaluators	Improves fluency, structure, and grammar accuracy
Speaking Practice	AI chatbots (e.g., ELSA Speak, Speech ace)	Enhances pronunciation, fluency, and interaction
Vocabulary Learning	AI-driven spaced repetition (Duolingo AI)	Provides personalized learning based on progress

Grammar Correction	AI-based grammar checkers (e.g., Grammarly)	Helps learners improve sentence construction
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The evaluation of AI implementation in ELT through real-life cases consisted of three major studies. AI writing programs such as ChatGPT combined with Grammarly led university students with English as a second language to enhance their writing skills by 30% during a university study (Şengul, 2021). Throughout this ESL pronunciation training study, students who used ELSA Speak achieved a 20% improvement in pronunciation accuracy during three months. Research conducted in high schools discovered that the application of gamified AI learning through Duolingo AI and Quizlet led to double the levels of student interest during educational sessions (Irons, 2024). A summary of the important research conclusions appears in Table 3.

Table 3
Case Study Findings on AI in ELT (Author's own work)

Case Study	AI Tool Used	Findings
University-Level AI Writing Workshops	ChatGPT, Grammarly	Writing fluency improved by 30%
AI-Assisted Pronunciation Training	ELSA Speak	Pronunciation accuracy improved by 20%
Gamified AI Learning in High Schools	Duolingo AI, Quizlet	Student engagement increased by 50%

The assessment of AI in ELT followed two systematic pedagogical frameworks. The SAMR (Substitution, Augmentation, Modification, and Redefinition) model specifies different learning transformation levels where AI integration occurs. The TPACK framework evaluates how Artificial Intelligence fits within current educational teaching systems. The SAMR model demonstrates AI usage in ELT through the information shown in Table 4.

Table 4
AI Integration in ELT Based on SAMR Model (Author's own work)

SAMR Level	Description	Example in ELT
Substitution	AI replaces traditional methods	ChatGPT replaces manual grammar feedback
Augmentation	AI enhances existing learning tasks	Grammarly provides real-time writing corrections
Modification	AI significantly redesigns learning	AI-powered chatbots provide real-time tutoring
Redefinition	AI enables new learning experiences	AI-driven adaptive learning platforms

The researchers combine SAMR and TPACK models to create evaluation methods that assess AI implementation in ELT and its positive impact on language teaching. Additional research must concentrate on fundamental areas because scholars have limited knowledge regarding how AI impacts long-term linguistic development as well as cultural learning and assessment processes. Research needs to perform additional analyses to determine permanent impacts across different educational methods and answer ethical questions related to AI in language education (Kildé, 2024). Systematic literature reviews are structured evaluation techniques for assessing Generative AI technology in the educational field of ELT. The research uses PRISMA filtering alongside empirical data study and pedagogical framework assessment to provide evidence-supported information about AI education functions in language teaching (Alasadi & Baiz, 2023). The investigation provides hands-on information to teachers and researchers, and policy decision makers who examine AI-based language education and enhances active discussions about educational AI curricula. The progressive development of AI systems will expand ELT applications, which will necessitate more research about AI ethical concerns as well as long-lasting educational benefits for students across all backgrounds (Liladhar, 2024).

Applications of Generative AI in ELT

Multiple studies extol the integration of Generative AI in English Language Teaching (ELT) because researchers consider it a solution to overcome conventional pedagogical obstacles. Many available research publications focus on technological innovations in ELT with reports about learner acceptance without providing sufficient analysis of educational progress results or how students develop autonomy across different teaching periods. AI platforms Grammarly and ChatGPT serve frequently as powerful tools that automate grammar correction, together with stylistic enhancement and content production for writing needs. According to Brown et al. (2020) and Nathir Ghafar et al. (2023), Grammarly produced significant improvements in student grammatical ability along with increased confidence rates through six weeks of use, which reduced errors by 25%. The reported research lacks clear documentation of research methods and fails to evaluate writing task differences and language genre differences among learners. The advantage of automated feedback provides speed, but researchers lack information about how these automated corrections link with proven theories of language acquisition and scaffolding educational methods. Features in writing support tools might negatively impact metalinguistic learning since students who merely accept automated feedback instead of engaging in active editing may fail to develop such language skills.

Stay + Teflon shows that promoting creative writing using ChatGPT tools receives praise because they stimulate innovative thinking alongside linguistic exploration (Crompton et al., 2024). Most discussions do not include critical points of view. The utilization of AI-generated prompts tends to receive acclaim as innovative, but experts fail to investigate what constitutes appropriate content. The available studies do not explore whether students truly understand AI-provided structures or if they just create duplications of AI-generated outputs. Research studies about improved learner autonomy remain limited because observational data from both time-based and classroom research have not yet been properly collected. ELSA Speak, together with ChatGPT, delivers artificial dialogue sessions that evaluate pronunciation and help users practice fluency through their platforms. Speech recognition systems and the literature endorse these tools as beneficial learning solutions for distant students from deprived educational areas (Ejaz & Jamil, 2024). A thorough investigation based on pedagogical standards shows that these applications display certain drawbacks. For instance, conversational AI lacks authentic spontaneity, non-verbal cues, and negotiation of meaning—essential components of real-life communication. Due to a lack of emphasis on interactional competence and pragmatic appropriateness, Baskara (2023) joins most researchers in their assessment of surface fluency progress. The ability of students to use their AI-learning skills in genuine communication situations has not been validated through research.

The widespread admiration of AI's native-speech capabilities routinely overlooks both linguistic and cultural variations and the dialectal range of the human population. ELSA's speech recognition system bases its pronunciation system on American English standards, which tends to exclude various non-native speech patterns, thus preserving linguistic unfairness toward speech diversity. Few studies analyze AI-supplemented speaking exercises in comparison to basic human instructor techniques, resulting in partial research results and unexplored learner satisfaction and outcome equivalence. In the domain of vocabulary and grammar acquisition, AI-driven applications like Quizlet, Memrise, and ChatGPT offer adaptive exercises and context-based reinforcement. The scientific literature indicates that these tools establish more accurate connections between vocabulary enhancement and syntactical development by students. Research by Moorhouse and Kohnke (2024) demonstrates that Quizlet helps learners retain 40% more vocabulary and decrease their syntax mistakes by 35% when used by beginner students.

These promising results are most often shared without proper methodological control or enough information about teaching conditions. The black-box assessment of short-term recalls hinders researchers' ability to assess tool effectiveness for promoting deep learning and transferable productive outcomes. The lack of thorough criticism exists regarding how these tools should be taught pedagogically. Porridge repetition of vocabulary with flashcards works to increase memorization yet fails to develop semantic complexity and practical comprehension. The grammar correction systems provided by Grammarly present language learning as either correct or incorrect information without regarding essential elements for advanced language skills, which include rhetorical objectives and audience analysis, along with stylistic choices. Examinations of how learning tools support learners of differing literacy skills and cognitive approaches, along with students having learning disabilities, remain underdeveloped.

The most well-known characteristic of Generative AI in ELT provides customized instruction to each learner. Research shows that Duolingo and Rosetta Stone, and ChatGPT adjust their material through user interactions and evaluative results, and progression stage indicators (Lee et al., 2025). The educational platforms deliver targeted educational guidance through adjustable learning pathways, which work to spread education opportunities to all learners. The automated learning adjustments through algorithms in such systems create fundamental issues regarding disclosure and learner information protection, and instruction accuracy. Performance-based AI system adaptation happens without learner misconception diagnosis or conceptual explanation delivery, which are essential to effective learning processes. The analysis of personalization in modern literature often overlooks the entities that benefit from these criteria within systems that utilize this practice. The research by Şengul (2021), alongside Ironsi (2024), indicates better student commitment together with improved student retention, yet data mainly derive from autonomous adult learners in self-directed programs, which might fail to apply to traditional classroom settings. Little evidence exists to show whether students comprehend AI-created assessments and utilize them, or if automated evaluations diminish student self-direction and analytical abilities. Academic research needs to approach the idea of AI-enhanced learner autonomy skeptically because learner autonomy includes reflective capabilities and metacognitive abilities, which current AI tools rarely provide.

Research about the social and emotional aspects of integrating AI remains substantially absent from the available studies. Little research exists about how students understand these digital tools when examining their relationship to identity development and motivational factors as well as their anxiety levels. Research evidence confirms that AI does not always lessen student anxiety through its 'judgment-free' features despite frequent claims to the contrary. A deficiency exists since most AI research bypasses the evaluation of its effects upon classroom environment dynamics, as well as teacher teaching methods and student interaction. Teachers need to understand how they should adjust their instructional roles when AI systems assume responsibility for providing feedback to students. The implemented pedagogical reforms need further in-depth analysis. The extensive array of Generative AI uses in ELT emerges from the literature but receives limited investigation of specific educational values and systems in its applications and impact. Almost all current research examines Generative AI effectiveness only through initial results, including mistake reduction and vocabulary growth, and self-assurance improvements, yet they ignore advanced educational processes together with the broader institutional effects. The necessity exists for research teams to unite AI creation with educational theory research alongside learner diversity understanding and cultural and social factors of language learning under technology. Such critical analysis is necessary to prevent ELT research from focusing on tech-determinism since these generalizations

diminish the specific characteristics of language education in extensive human environments.

Benefits of Generative AI in ELT

English Language Teaching (ELT) professionals mainly appreciate generative AI tools because they increase access to education while improving class participation and teaching effectiveness. Most research studies present these perceived benefits, yet they fail to analyze in-depth teaching requirements and environmental boundaries, and long-term technical viability. Research evaluation indicates that while generative artificial intelligence gets praise for its ability to deliver flexible educational scale-up yet its capacity to establish equitable ELT practice reform remains unsettled and insufficiently investigated. Users consider expanded accessibility combined with greater flexibility as the main advantages of AI-enhanced ELT. Kildé (2024) and Alasadi and Baiz (2023) establish that AI tools, including Grammarly and ChatGPT, make education accessible to learners who are distant or underrepresented by eliminating physical classroom requirements. The statements fail to acknowledge the fundamental infrastructure requirements, such as internet connectivity stability, together with access to devices and digital skills among marginalized learners. The literature maintains that AI tools operate with no cultural or linguistic biases when it ignores the tasks these tools must accomplish for different regional language uses and social linguistic standards among non-dominant English speakers.

AI efficiency is commonly reflected through scalability levels in massive open online courses (MOOCs). Research by Liladhar Rane (2024) and other scholars mainly employs user statistics along with completion metrics, yet fails to evaluate how well automated systems relate to student engagement or mind processing workload and contextualized feedback quality. AI systems that run 24/7 allow adult and non-traditional students to learn on their own time, but they create unsupported study situations because of this flexible availability. Research rarely evaluates the possible learner disadvantages of self-directed learning through AI automation, which affects students who lack self-regulatory strategies or motivation, especially when teacher guidance plays a vital role in their educational context.

The second main area of widely noted advantage encompasses learner engagement, which seems to find its peak through gamified educational systems such as Quizlet and Memrise. Wulantari et al. (2023), along with Mohzana (2023), commend how AI tools use their interactive design elements to build interfaces that replicate actual life situations. Academic criticism arises from the instructional deficiency of entertainment-based features that boost student engagement. The motivational aspect of gamification systems leads to reduced complexity of language assignments as well as encourages shallow accomplishments through point collection. Existing studies about game-like activities in English language teaching show a weak commitment to analyzing their compatibility with educational goals, as well as learner objectives and language proficiency requirements. The real-time feedback mechanisms receive praise from Ishaq et al. (2021), yet the studies provide no distinction between fast feedback delivery and its educational value. Instant corrections alone do not result in better language acquisition according to second language acquisition theory because the essential aspects of feedback timing and learner reflection, along with scaffolding, serve as vital components.

The way teachers utilize generative AI for support in language learning remains a field that needs more intense evaluation. Both Grade scope and Grammarly promise teacher auto benchmarking alongside in-depth feedback analysis (Kotei & Thirunavukarasu, 2023), and ChatGPT supports teachers in creating lesson plans and

educational content (Vančová, 2023). Much of the available literature focuses on technology as the main subject while missing many aspects that arise during classroom implementation alongside pedagogical decision-making processes. Educational institutions need to consider that auto-grading technology can reduce teacher control of grading systems and make it challenging to assess student work quality during holistic assessments of their writing abilities. The majority of research focuses on efficiency improvements while neglecting the analysis of how such tools restructure the teaching process to turn educators into machine-assisted supervisors who lose classroom control during instructional activities. AI-driven analytics obtain frequent praise as disruptive instruments for data-based instruction, but educators remain doubtful about how these data sets should be understood and utilized. These systems detect performance patterns of students but fall short in determining the core reasons for learning difficulties and suggesting educational remedies. Current academic research provides insufficient insights into the training duties assigned to teachers who need to analyze algorithmic results while applying them effectively in educational settings. AI implementation at an optimal level demands teachers to develop additional competencies beyond digital proficiency, including critical AI understanding along with educational inventiveness and ethical analysis (Kildè, 2024; Vančová, 2023).

Professional discussions about ethical problems linked to growing AI dependency remain minimally studied, even though they represent an extremely critical issue. Few sources dedicated to praising AI time efficiency pay attention to the dangers of automation excess in assessment procedures and educational resource development. Studies lack sufficient investigation of the potential negative effects on both teaching expertise and instructor authority that occur when AI controls essential educational functions. A limited number of studies examine how teacher dependence on AI-produced content and feedback will affect them in the long run, particularly when professional development opportunities remain scarce in low-resource situations. Literature discussions about generative AI demonstrate advantages and efficiency, but fail to address classroom situations and language learning principles or justice factors within educational settings. The advantages of generative AI tools, through scalability and administrative help and improved learner engagement, do not provide equivalent benefits in every educational setting worldwide. Even though society displays great excitement for technological progress, traditional educational barriers alongside linguistic discrimination persist because proper learning strategies remain missing. Generative AI receives an instrumentalist evaluation in the current literature because of its functional capabilities for ELT, although it exhibits potential to enhance accessibility and student involvement, and instructional support. Research must act now to thoroughly analyze the exchange of advantages and disadvantages caused by AI integration in language teaching, together with the ethical challenges it introduces and the prolonged impacts it generates. The analysis needs to shift past sentimental descriptions since this development will allow researchers to better understand artificial intelligence implementation for efficiency while promoting both inclusive and transformative language learning experiences.

Challenges and Limitations

Popular support for generative AI in English Language Teaching (ELT) encounters limitations according to critical research findings about its actual application scope. The majority of research about AI deals with quality, accuracy, and ethical risks alongside accessibility restrictions, even though these features function outside main structures. The limitations described affect the operational capabilities of AI tools as they question the feasibility of their use for teaching purposes. The key issue pertains to the accuracy level alongside the quality of AI-generated results. The research shows that Grammarly, along

with ChatGPT and comparable tools, encounter increasing evidence of their incapability to handle sophisticated linguistic material while claiming they offer accurate contextual solutions with grammatical precision. AI systems excel at fixing simple syntax mistakes at the surface level, so Brown et al. (2020) believe they nevertheless fail in interpreting figurative language or cultural references and idiomatic expressions and metaphorical language constructs. The systems produce correct technical writing but fail to deliver the advanced communicative richness needed to achieve real proficiency. Pragmatic unawareness within AI responses presents significant challenges when dealing with intercultural language use since language operates heavily from social rules and appropriate registers.

The poor interpretability of generative AI systems becomes worse when learner inputs are unclear or poorly arranged because the systems frequently fail to translate their content accurately. AI-generated feedback shows both a lack of usefulness and occasional misleading content, especially when directed at beginner learners who struggle to determine the feedback's authenticity (Ozfidan & Burlbaw, 2020). The algorithm's decision-making opacity during large language model refinement causes developers to keep student and educator feedback processes hidden and hinders students' ability to evaluate the tool's generation method. The literature demands a more thorough assessment of ethical questions and privacy matters. Machine learning systems need user information ranging from written text to audio recordings, along with recording user behaviors to give customized feedback. Data security becomes a major concern because of these practices, primarily when dealing with young students or vulnerable educational groups. The authors of Crompton et al. (2024) emphasize that numerous AI platforms do not clearly communicate their policies regarding data storage practices, third-party sharing, and anonymization methods that create vulnerabilities for user surveillance and commercial and profiling activities. The risks posed by GDPR, alongside other protection regulations, are not consistently enforced, particularly in international locations and regions with minimal regulatory oversight.

There exists a lack of research about the ethical consequences of depending on AI technologies. When generative AI systems fully integrate into education systems, there is an increasing likelihood that they will replace essential human contact, which is crucial for language education. AI systems cannot duplicate the social nature of language learning because they cannot understand meaning negotiation and cultural exchange or show empathetic interaction (Nathir Ghafar et al., 2023). The excessive use of AI systems as feedback models alongside their use in designing tasks and providing instructional examples defeats student motivation for collaborative thinking and critical thought development. Research about the impact of these changes on teacher-learner relationships mainly focuses on educator-student interaction in formative assessment instead of identity development or student participation. AI tools deal with wider ethical problems because they contain biases and show deficient representation. The training process of language models involves extensive datasets that maintain dominant cultural patterns and linguistic standards of society. The system produces results that confirm stereotypes and exclude less established forms of the English language. Research about sociolinguistic effects of AI in English language teaching, along with its impact on English language versions, remains minimal. The demand for algorithm transparency, coupled with inclusive training datasets, improves, but operational frameworks for bias assessment and reduction show limited advancement.

The implementation of generative AI in ELT encounters additional challenges when it comes to accessing programs equally. Equipment and internet connections, and digital literacy support devices, remain unavailable to students in underdeveloped rural places as

well as individuals from lower-income backgrounds, thus limiting their ability to use AI tools effectively. Such inequalities in education become worse because AI-enhanced learning benefits primarily students from privileged backgrounds rather than creating an even educational landscape. Literature advertisements about wide compatibility fail to acknowledge operational and financial barriers that prevent meaningful AI utilization in circumstances of limited resources. Although Duolingo and Grammarly provide free versions of their software, users must pay for premium features that normally serve as crucial components for language mastery. The paywall subscription system creates barriers to access, which reinforce social inequalities among learners and institutions that cannot pay for subscriptions (Baskara, 2023). Research has been scarce regarding the educational constraints that appear in basic versions of free tools, as well as how business strategies affect teaching methods. The growth of AI faces two main barriers involving cultural and psychological resistance factors, along with infrastructural constraints. Teachers occasionally view artificial intelligence as an enemy of conventional education because they doubt both its educational worth and its fiscal capabilities. The resistance to AI use in classrooms grows stronger because teachers receive insufficient training and professional development that lacks preparedness to teach with AI effectively. A majority of research documents resistance to AI through technophobia along with conservatism, yet evidence shows educators base their doubts on legitimate concerns regarding AI's implementation of humanistic and learner-centered instructional methods.

Learners tend to doubt AI systems because they encounter unpredictable feedback along with unclear correction patterns. Users lose their confidence in the tool after these negative experiences, and this decreases their willingness to work with AI-based learning activities. There is a lack of extensive research that examines the emotional aspects of AI use by learners, because of which the academic understanding of AI-mediated learning experiences remains incomplete. A number of researchers support comprehensive policy-making structures that control the deployment of AI systems in education. Security standards for data protection must be implemented together with teacher education initiatives and guidelines for ethical AI deployment in ELT (Crompton et al., 2024; Nathir Ghafar et al., 2023). The study of policy effectiveness towards AI implementation remains scarce because experts currently lack standard practices. Systemic structures, along with monitoring protocols, need to be implemented because teachers and students presently handle the majority of issues without institutional backing. AI advances open numerous possibilities for ENL improvement, yet existing implementation challenges still need special attention because AI-based solutions are insufficient. Quality problems and ethical risks, together with technical restrictions and user opposition, should receive full attention rather than technological workarounds. The conflicts illustrate fundamental issues that relate educational technology to teaching methods, in addition to issues regarding social equality and human agency. Assessing the long-term results of artificial intelligence demands adaptation to advance language education technology beyond current technological excitement for varied populations living in conditions with unequal resources.

Pedagogical Impacts and Methodologies

Generative AI functions as an educational innovation for English Language Teaching that transforms traditional roles and provides new teaching techniques alongside digital learning environment restructuring. The current studies present positive perspectives regarding AI educational tools, yet they do not explore implementation barriers nor detect the unbiased nature of AI interventions. There is a shortage of studies analyzing how member identity changes during educational interactions and teaching command, while research on individual and performance benefits far exceeds this domain.

Teacher roles in AI-enhanced education classrooms continue to evolve because learning institutions prioritize student freedom alongside their ability to operate in digital platforms. According to Baskara (2023) and Nathir Ghafar et al. (2023), AI technology lowers teaching responsibilities by transforming teachers into experience facilitators who co-design education with students. The discussion gives little attention to the philosophical consequences that result from this paradigm change. Teachers who use AI-generated content must combine its speed of delivery with proper pedagogical evaluation because tools like ChatGPT and Grammarly require them to validate the AI outputs independently. Little reliable evidence exists to show teachers' readiness to take on these expanded responsibilities, as well as the effects of these new duties and their job responsibilities and professional self-identification.

AI tools receive praise for helping lesson development in the academic literature, while experts neglect studying how these tools generate content without considering curriculum-based reasoning. AI implementations yield quick results in producing vocab lists together with discussion aids and feedback, but the approach fails to adopt curriculum-match criteria and personalized scaffolds or cultural sensitivity components. According to Crompton et al. (2024), AI tools demonstrate weakness in understanding socio-cultural connotations, but numerous studies promote these systems by invalidating these technical limitations. The teacher functions as a cultural mediator and a critical educator in classrooms, yet this role is not acknowledged properly among those who emphasize technological solutions in education. Independent research shows that emerging educational techniques like flipped classrooms, mixed learning, and task-based instruction would directly benefit from AI integration. The educational tools, including Memrise as well as Duolingo, and ChatGPT, receive appreciation for their ability to support pre-learning studies and customized digital practice sessions. AI access provides only one component for the successful execution of pedagogically promising models, and their implementation requires additional elements. Studies about learner preparedness in metacognitive skills and digital literacy to handle autonomous learning lack clear proof, according to the existing research. The research lacks thorough investigations into how AI-assisted activities should be orchestrated with teacher-led activities within flipped and blended approaches.

Person-centered teaching methods benefit from AI support, according to the literature within the field of task-based learning. Realistic platforms for hotel reservations as well as professional negotiations have proven effective in developing fluency while promoting contextual learning, according to Kotei & Thirunavukarasu (2023), the realistic nature of these virtual simulations remains uncertain since most of them use programmed conversations or static input-to-output systems, which fail to simulate natural, spontaneous dialogues. These tools provide minimal adaptation functionality to create meaningful responses to learner mistakes because their feedback system mostly responds with surface grammar corrections. The deployment of AI takes place throughout online learning spaces such as VLEs and MOOCs to support large-scale personal learning. The learning platforms Coursera and edX consist of systems that provide recommended content material alongside feedback systems, together with performance analytical tools. The additional operational features permit easier access, but they trigger concerns regarding ownership of educational data, together with monitoring students' activities and the reduction of personal involvement in learning. Available research fails to comprehend the moral implications that arise from these intensive data practices and therefore lacks proper explanations about their impacts on learner trust and agency.

Modern AI educational tools provide two features that facilitate immediate virtual learning experiences alongside non-timed independent education resources. The

educational aid provided by chatbots occurs within live sessions, yet applications like Grammarly and ELSA Speak do their work for learners during asynchronous learning periods. Wulantari et al. (2023) state that digital versatility creates more student involvement, yet the feedback's actual instructional worth and quality remains indecisive. Efficient immediate feedback might not constitute optimal language learning conditions because proper language acquisition methods require feedback that matches learners' development level and remains specific, and occasionally requires some delay for students to process it before receiving correction. Several unexplored structural together with pedagogical issues persist as challenges in the implementation of AI. The digital divide hinders learners from experiencing AI-enhanced learning environments properly because it prevents full participation, specifically in educational facilities that have limited resources. Research demonstrates little investigation into the materials, program extent or assessment of trainer training and professional development initiatives, which experts claim are vital for implementation success. Research lacks sufficient examination of how AI transforms teaching psychology by evaluating its effects on teacher skills, together with their potential professional breakdowns and transformation of professional identity. The educational benefits of generative AI in English Language Teaching extend beyond traditional methods, yet they produce both positive and negative consequences, which affect different teaching scenarios differently. The existing research studies AI as an innovation tool yet fails to analyze its theoretical match with education models and its effect on educator control and student advancement. Research needs to advance its complexity because it must study AI integration by assessing both technical capabilities and their effects on learners, together with teachers and educational morality.

Discussion

The implementation of Generative AI technology changes English Language Teaching (ELT) through applications that produce benefits for students and teachers during their educational experiences. Users achieve enhanced writing capabilities through AI tools such as Grammarly and ChatGPT because these systems supply grammar assistance, together with content generation features and advice. Learners gain abilities from these tools to improve writing structure, coherence, and fluency while building confidence, together with self-regulated learning abilities. Automated feedback tools help students conduct several writing rounds to achieve better quality outcomes that lead to an interactive and productive writing experience. Users can achieve speaking proficiency improvements with AI tools that contain both ChatGPT and ELSA Speak. Real dialogue simulations paired with personal pronunciation guidance in these digital tools support students to practice their English-speaking fluency so they can build their confidence level. Students benefit from AI-generated interactive tutoring platforms that provide practice opportunities anywhere, as well as accessibility to diverse educational groups without teachers being present (Ejaz & Jamil, 2024).

Artificial intelligence systems have increased the educational value of vocabulary and grammar education for users. The computerized teaching platforms utilize artificial intelligence to optimize educational progression through time-sensitive exercises that increase mental retention of users while boosting their knowledge of grammar rules. Programmed content-modification mechanisms automatically active in these tools apply customized instruction for individual students, thus improving operational efficiency (Umar, 2024). The integration of AI in the field of ELT faces persistent obstacles along with its implementation. The AI content creation system produces excellent outputs but faces accuracy limitations that come from dealing with complex cultural language situations. Ethical issues such as data privacy, algorithmic bias, and over-reliance on AI also pose

risks. The digital inequality presents additional troubles for students from underprivileged areas because they lack access to technological resources.

Artificial Intelligence pedagogy links with SAMR and TPACK models to substitute conventional methods and boost educational practices that achieve augmentation through modification up to definition. Personal support features embedded in AI systems add value to human instruction through standardized learning delivery, yet educators retain an essential role in teaching students meaningful analytical thinking skills along with original thinking and cultural acumen (Ruiz-Rojas et al., 2023). The future will bring additional AI developments that establish potential opportunities to fix these problems. The analysis of AI's extensive effects on language education requires examination at different development periods alongside research on inclusive relations and team-based methods that shape moral AI system production. Generative AI transforms ELT only through combined use with human teachers who ensure both learning quality and student access.

Conclusion

Generative AI brings learning transformation to English Language Teaching (ELT) through combined features of real-time feedback and grammar correction, and conversational practice. Through the combination of ChatGPT with Grammarly and ELSA Speak, students receive independent learning possibilities that enhance their writing abilities and their spoken fluency and vocabulary skills. Through AI, students receive individualized lessons that match their academic requirements and receive educational gamified activities that produce better student engagement. The implementation of Artificial Intelligence allows teachers to work on developing critical thinking and creativity in students by taking over tasks related to grading and lesson planning. AI establishes language learning accessibility because it modifies learning atmospheres to suit individual situations, including cases of absent native language contact or limited facilities. Students who use chatbots with speech recognition technologies can get instant language practice through which their pronunciation skills improve. The educational guidance AI provides contains personalized plans that target the development of unique skills for its users. Teachers gain advantages from artificial intelligence through lesson preparation and student work assessment, which leads to methodological improvement reports.

AI technology implementation for ELT meets several essential hurdles that must be addressed before successful deployment. The accuracy problems of artificial intelligence content need evaluation solutions because it deals with complex language systems and cultural nuances. Moreover, AI models create problems by enforcing discriminatory instincts while producing false information that affects understanding between people through language. Open ethical policies must exist to protect personal data privacy and the fairness of algorithmic systems throughout their direct management of artificial intelligence systems. AI-enhanced learning tools face challenges due to digital disparities in disadvantaged communities, and educational practitioners require training because they doubt the use of technology in education.

Future Directions and Trends

Generative AI is destined to revolutionize ELT through constant technological innovation, shifting research agenda, as well as the formulation of sound policies. This section discusses the application of future developments, the contribution of future directions, and the implications of the ethical considerations for the fair usage of Artificial Intelligence in teaching and learning.

Technological Advancements

The next future of generative AI is in the applied, hybrid multimodal tools, including text, speech, and graphics for generation. In contrast to present-day approaches already considering mainly one modality of interaction, next-generation AI strategies envision integrated learning environments where all those are integrated. For instance, a multimodal AI tutor can explain using textual description in writing, offer feedback in terms of pronunciation, and use illustrations such as graphics or animations to explain a grammatical concept. These capabilities would allow the development of more sophisticated and complex forms of learning delivery that would accommodate various learners' needs and preferences. Therefore, with the advancement of these technologies lies the extent of how they will impact ELT, and this will call for advances, partnerships, and funding in AI. Therefore, as designs for learning become more learner-focused and future AI capabilities encompass multiple modes of delivery, such systems will continue to be the key agents in improving language learning across the globe.

Research Opportunities

However, there are several limitations in the present generation of research regarding the future impact of generative AI in ELT. Many prior works are limited to addressing short-term effects like exercises' effects on a student's writing or speaking abilities within one learning session. However, a strength of this study lies in understanding the short or mid-term learning effects in learners when using AI tools, and thus, more importantly, further longitudinal research is required to determine the long-term learning effects as far as learners' language mastery, learning retention, and/or their academic achievements. For example, research could look at how such use of AI feedback affects the learners' writing speed over several years. It is going to be important to collaborate with practitioners of other disciplines in order to deal with these research questions adequately. By inviting specialists in linguistics, education, psychology, and AI creation, the researchers can construct integrated models of how generative AI interventions influence language acquisition.

Policy and Ethical Considerations

The integration of generative AI in ELT is thus truly fast-paced, which may heighten concerns about the place of ethical and practical contexts when informing learner-taking practices. There is a desperate need for policy regulation of AI in education so that the responsible use of AI in education to solve data privacy, algorithm transparency, and equitable use can be outlined properly. Apart from hacking, spamming, and impersonation, the main issue of concern is the granting of access to user data or personal information, or writing samples or voice records, to render the assistance offered by AI solutions. Policies formulated in the legal systems should ensure that only protective steps like encrypted and anonymity of the data would be allowed for maintaining the learner's details' security. Transparency of AI algorithms is crucial all the same for educators and learners to know how a tool processes information and arrives at a certain conclusion. Such clarity can alleviate fears that the data shall be used in a way that is biased and against the individual, or over the use of the data in a way that may harm them. Considering such policy and ethical questions, generative AI can be implemented into ELT in a practical and fair way, and thus create the necessary conditions for further progressive development of language learning.

Recommendations

The adoption of best practices leads institutions to achieve their optimal outcomes when integrating Artificial Intelligence systems. Schools need to create training programs that demonstrate AI instructional capabilities to teachers while training them to resist AI content misuse. The use of AI technology should assist with teaching activities while educators retain their role as guides for education, which combines AI feedback with human-delivered contextual instruction. All ethical measures must merge three key elements to protect privacy activities while securing data security and revealing algorithmic operations. Every student can benefit from AI-enabled educational tools using enhanced digital pathways and implemented programmed AI technologies, which reduce the overall costs. Research needs to expand to assess completely how AI affects speech development and intellectual abilities, and learning independence. Further studies need to determine how AI affects fluency growth in students while also assessing its capabilities to teach problem-solving independently. The development of moral AI tools for education needs cross-sectoral teamwork among computer systems developers and teachers who work together with linguistic specialists. The solution of existing issues will allow AI to progress English Language Teaching through innovative program creation and inclusive, effective teaching encounters with proper ethical standards preserved.

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