

Role of Artificial Intelligence in English Language Teaching and Learning

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ABSTRACT

Artificial Intelligence (AI) is increasingly influencing English language teaching and learning by introducing adaptive learning environments, automated assessment systems, intelligent tutoring applications and conversational tools that facilitate language practice beyond the traditional classroom. The integration of AI into English language education offers opportunities to address persistent challenges associated with individual differences in language proficiency, limited access to personalised instruction, inadequate speaking practice and delays in receiving corrective feedback. AI-powered applications can support the development of listening, speaking, reading and writing skills through interactive exercises, speech recognition, grammar analysis, vocabulary recommendations and context-sensitive explanations. Generative AI systems have further expanded these possibilities by enabling learners to engage in simulated conversations, develop written compositions, explore grammatical structures and receive explanations tailored to their learning needs.

This research paper examines the role of artificial intelligence in English language teaching and learning through a critical analysis of its pedagogical applications, potential benefits and associated challenges. It adopts a qualitative, literature-based research approach, drawing upon established scholarship on computer-assisted language learning, intelligent tutoring, educational technology and recent developments in generative AI. The discussion considers the implications of AI for teachers, learners, curriculum designers and educational institutions, with particular attention to learner autonomy, differentiated instruction, assessment practices, academic integrity, data privacy and unequal access to digital resources. The paper argues that AI can strengthen English language education when it is integrated with communicative teaching methods, human interaction and clearly defined learning objectives. However, technological efficiency should not be confused with educational effectiveness, and AI-generated feedback requires critical evaluation. The study proposes a human-centred approach in which teachers retain responsibility for pedagogical decisions while AI serves as a supplementary resource for practice, feedback and instructional adaptation.

Keywords: Artificial Intelligence, English Language Teaching, English Language Learning, Generative AI, Computer-Assisted Language Learning, Personalised Learning, Language Assessment, Educational Technology.

INTRODUCTION

ROLE OF ARTIFICIAL INTELLIGENCE IN ENGLISH LANGUAGE TEACHING AND LEARNING

1. Introduction

Artificial Intelligence (AI) has emerged as a transformative technological development in education, influencing teaching methodologies, learning environments, assessment practices, and the overall acquisition of knowledge and skills. In English language teaching and learning, AI offers considerable opportunities to improve linguistic competence, facilitate personalised instruction, provide immediate feedback, and support learners in developing reading, writing, listening, and speaking abilities. Traditional approaches to English language education have often depended on teacher-led instruction, prescribed textbooks, classroom discussions, and periodic assessments. Although these approaches remain valuable, they may not always accommodate the diverse linguistic

backgrounds, learning speeds, and individual requirements of students. AI-supported educational tools provide additional opportunities to address these differences by creating flexible, interactive, and learner-centred environments. Consequently, the integration of AI into English language education has become an important area of academic research and pedagogical innovation.

AI in English language teaching encompasses a range of technologies, including natural language processing, machine learning, intelligent tutoring systems, speech recognition, automated writing evaluation, conversational chatbots, and generative AI applications. These technologies enable educational platforms to analyse language input, identify grammatical errors, generate explanations, simulate conversations, and recommend learning materials according to individual performance. Applications such as intelligent grammar checkers, pronunciation assessment tools, translation systems, and AI-based conversational assistants can help learners practise English beyond the boundaries of conventional classrooms. Generative AI systems, in particular, can produce examples, explain complex grammatical structures, suggest vocabulary, and facilitate writing exercises. Such capabilities may be especially beneficial for learners who have limited opportunities to communicate in English outside educational institutions. However, their effectiveness depends on the quality of the generated information, the learner's proficiency, the instructional objectives, and the extent of teacher supervision.

The potential contribution of AI is particularly significant in English language learning because linguistic development requires sustained practice, meaningful interaction, and timely corrective feedback. In conventional classrooms, teachers may find it difficult to provide individualised feedback to every student, particularly in large and linguistically diverse classes. AI-based systems can supplement classroom instruction by allowing learners to practise language tasks repeatedly, receive immediate responses, and identify areas requiring improvement. For example, speech-recognition technologies can support pronunciation practice, while automated writing tools can identify grammatical inconsistencies, spelling errors, and problems with sentence construction. Conversational AI can also create simulated communication situations in which students practise asking questions, expressing opinions, and responding to different conversational contexts. Nevertheless, technological feedback cannot fully replace the teacher's ability to interpret contextual meaning, recognise emotional difficulties, encourage critical thinking, and develop communicative competence through human interaction.

The pedagogical value of AI can be understood through established theories of language acquisition and educational technology. Vygotsky's (1978) sociocultural theory emphasises the importance of social interaction, scaffolding, and guided learning in cognitive development. AI-supported activities may provide supplementary scaffolding by offering explanations, examples, and graduated assistance. Similarly, Krashen's (1982) theory of second-language acquisition highlights the significance of comprehensible input in language development. AI applications can expose learners to language materials adapted to different proficiency levels, potentially making input more accessible. From a communicative language teaching perspective, conversational agents may provide additional opportunities for meaningful language practice. However, these theoretical connections should be interpreted cautiously: AI can support selected learning processes, but the presence of technology alone does not establish that meaningful interaction or language acquisition has occurred.

The increasing use of AI also raises questions concerning academic integrity, data privacy, algorithmic bias, unequal access to technology, and learners' dependence on automated assistance. Students who rely excessively on AI-generated essays, translations, or grammatical corrections may complete assignments without sufficiently developing independent language skills. Furthermore, AI-generated explanations may contain factual inaccuracies, culturally inappropriate examples, or misleading linguistic recommendations. Differences in internet connectivity, digital literacy, device availability, and access to paid educational applications may also create inequalities among learners. Therefore, responsible integration requires clear institutional guidelines, appropriate digital literacy training, teacher involvement, and assessment methods that evaluate students' independent understanding alongside their ability to use technological resources effectively.

Against this background, the present study examines the role of artificial intelligence in English language teaching and learning, focusing on its pedagogical applications, potential benefits, limitations, and implications for contemporary language education. It considers how AI may contribute to personalised learning, language practice, learner engagement, formative assessment, and the development of communicative competence. It also addresses the changing role of English language teachers, who increasingly need to combine subject expertise and pedagogical judgement with technological awareness. The central concern is not simply whether AI can be introduced into English classrooms, but under what conditions its use can support meaningful, equitable, and academically responsible language learning.

Research on AI in language education has developed from early computer-assisted language learning towards adaptive platforms, intelligent tutoring systems, automated assessment, and generative AI. Chapelle (2001) established an influential framework for evaluating technology-mediated language learning through considerations of linguistic input, interaction, learner output, and feedback. Her work suggests that technological interventions should be assessed according to their contribution to language-learning processes rather than their

technical sophistication alone. This perspective remains relevant to contemporary AI applications because the availability of automated assistance does not necessarily guarantee improved linguistic competence.

Levy (1997), in his examination of computer-assisted language learning, explored the relationship between technological systems and language pedagogy. His work provides a foundation for understanding how digital tools can supplement conventional instruction while requiring careful consideration of learning objectives and classroom practices. Subsequent developments in intelligent tutoring and natural language processing have expanded these possibilities by enabling systems to respond more dynamically to learners' language production. Nevertheless, the pedagogical effectiveness of such systems depends on their design, the quality of feedback, and the manner in which teachers incorporate them into instructional activities.

Warschauer and Healey (1998) reviewed developments in computer-assisted language learning and demonstrated how changing technologies have influenced language teaching practices. Their analysis illustrates a broader shift from technology used primarily for repetitive exercises towards environments supporting communication, collaboration, and learner autonomy. This historical perspective helps situate AI within the continuing evolution of language education. Contemporary AI tools extend earlier computer-assisted approaches by generating language, interpreting user responses, and facilitating interactive practice; however, they also introduce new concerns regarding accuracy, transparency, and appropriate learner reliance.

Further research has examined the relationship between automated feedback and second-language writing development. Heift and Schulze (2007) investigated the application of intelligent computer-assisted language learning systems and discussed how computational technologies can provide individualised feedback and support language practice. Their work highlights the importance of designing systems that respond meaningfully to learner errors rather than merely identifying incorrect answers. In English language learning, this principle is relevant to grammar instruction, vocabulary development, and writing improvement. However, automated feedback may not adequately account for rhetorical purpose, cultural context, or stylistic variation, making teacher guidance necessary for more advanced language tasks.

More recently, Kohnke et al. (2023) examined the potential of ChatGPT for language teaching and learning, drawing attention to its applications in material development, language practice, and learner support. Generative AI can assist teachers in preparing exercises and differentiated learning resources while providing students with opportunities to explore vocabulary, grammar, and written expression. At the same time, its limitations require teachers to verify generated content and establish appropriate boundaries for its use. Kasneci et al. (2023) similarly discussed the educational opportunities and challenges associated with large language models, including personalised support, feedback, information reliability, and ethical considerations. Their analysis reinforces the need to integrate AI through pedagogically informed practices rather than treating it as an independent substitute for instructional expertise.

The literature indicates that AI has considerable potential to supplement English language education, but several questions remain unresolved. The effectiveness of AI tools may vary according to learners' proficiency levels, educational settings, digital literacy, and the nature of the language tasks involved. Moreover, the availability of AI-assisted practice does not necessarily demonstrate sustained improvement in communicative competence, independent writing, or long-term retention. Further empirical investigation is therefore needed to evaluate learning outcomes, learner perceptions, teacher preparedness, and the challenges associated with responsible AI adoption. The present study addresses these concerns by considering AI as a supportive pedagogical resource whose educational value depends on instructional design, critical engagement, equitable access, and effective teacher supervision.

2. MAJOR APPLICATIONS OF ARTIFICIAL INTELLIGENCE IN ENGLISH LANGUAGE TEACHING AND LEARNING

2.1 Personalised and Adaptive Learning

One of the most promising applications of AI in English language education is the capacity to adapt learning activities to individual requirements. Learners differ in vocabulary knowledge, grammatical competence, reading fluency, pronunciation and confidence in spoken communication. A uniform instructional sequence may not adequately address these differences, particularly in classrooms containing learners from varied educational and linguistic backgrounds.

AI-supported platforms can use responses, error patterns and task performance to recommend activities suited to a learner's current needs. A learner who repeatedly confuses the present perfect and simple past, for example, may receive additional explanations, contextual examples and targeted exercises. Another learner with stronger grammatical knowledge but limited vocabulary may be directed towards reading passages and word-learning activities.

Personalisation can also extend to the presentation of learning materials. Teachers or learners can request simpler explanations, additional examples or more challenging exercises. Such flexibility can make language instruction more responsive, provided that the material remains accurate and aligned with the curriculum.

However, adaptive learning should not be equated automatically with individualised education. AI systems may interpret performance incorrectly or recommend exercises that reinforce existing weaknesses. Teachers must therefore review the relevance of recommendations and consider factors that automated systems may not recognise, including learner motivation, anxiety, cultural background and classroom interaction.

2.2 Development of Speaking Skills

Speaking is a central but frequently under-practised component of English language learning. Learners may understand grammatical rules and written texts yet experience difficulty participating in spontaneous conversation. Limited classroom time, fear of making mistakes and insufficient opportunities to communicate in English can restrict the development of oral fluency.

Conversational AI tools can provide additional opportunities to practise dialogue in relatively low-pressure environments. Learners may simulate conversations involving introductions, interviews, academic discussions, customer service, travel or professional meetings. They can repeat the same task, experiment with alternative expressions and seek clarification when they cannot communicate an idea effectively.

For example, a learner preparing for a job interview may practise responding to questions about qualifications and experience. The system can suggest ways to organise answers, improve grammatical accuracy and select vocabulary appropriate to the professional context. Voice-enabled applications may also allow learners to practise oral responses and obtain feedback on speech features.

Such practice can contribute to confidence and familiarity with common communicative situations. Nevertheless, conversational fluency involves more than producing grammatically correct sentences. Effective interaction also requires turn-taking, pragmatic awareness, interpretation of social cues, clarification and adaptation to the responses of other speakers. AI conversation should therefore supplement, rather than replace, communication with teachers and other learners.

2.3 Pronunciation and Listening Comprehension

AI-based speech-recognition systems can support pronunciation practice by analysing spoken input and comparing it with expected words or phrases. Depending on the application, learners may receive feedback on intelligibility, word recognition, stress patterns or selected pronunciation features. This can help them identify recurring difficulties and practise independently.

Listening instruction can also benefit from AI-generated exercises, transcripts, vocabulary explanations and comprehension questions. A teacher may use an appropriate tool to prepare listening materials at different proficiency levels, while learners can request explanations of unfamiliar expressions or examine how a phrase functions within a conversation.

However, pronunciation feedback requires particular caution. Automated speech-recognition systems can misinterpret accents, background noise, speech disorders or unfamiliar pronunciation patterns. Moreover, native-like pronunciation is not a necessary condition for successful communication. Assessment should prioritise intelligibility and communicative effectiveness while recognising legitimate linguistic diversity.

2.4 Reading Comprehension and Vocabulary Development

AI can support reading development by adjusting text complexity, explaining unfamiliar vocabulary, generating comprehension questions and providing contextual examples. Learners who struggle with a difficult passage can request a simplified explanation before returning to the original text. More advanced learners can examine complex sentence structures, idiomatic expressions, figurative language and rhetorical techniques.

Vocabulary learning is particularly suited to contextual practice. Rather than presenting isolated definitions, AI tools can generate example sentences, compare related words and explain differences in register. For instance, learners may investigate the distinctions between request, demand and ask, including the social circumstances in which each expression is appropriate.

AI can also help teachers prepare differentiated reading activities for mixed-proficiency classes. Nevertheless, simplified explanations must preserve the essential meaning of the original material. Excessive reliance on summaries may discourage sustained reading, while generated definitions can be inaccurate. Learners should therefore be encouraged to consult dictionaries, examine the source text and evaluate the reliability of explanations.

2.5 Writing Skills and Automated Feedback

Writing is one of the areas in which AI has attracted considerable attention. Learners can use AI tools to identify grammatical errors, examine sentence structure, improve paragraph organisation and explore alternative vocabulary. Automated writing evaluation can also help learners revise drafts through repeated cycles of feedback and editing.

For academic writing, an AI tool may identify unclear sentences, inconsistent transitions or unsupported claims. A learner can then review these suggestions and decide which changes are justified. Used in this way, AI supports revision as a process of reflection rather than treating writing as a single completed product.

A significant pedagogical distinction must be maintained between feedback and substitution. When a system rewrites an entire essay, the learner may obtain a polished text without developing the ability to construct arguments independently. Similarly, grammatical correction alone does not ensure coherence, originality, evidence-based reasoning or appropriate academic style.

Teachers can address this problem by asking students to submit initial drafts, revision histories and short explanations of the changes they accepted or rejected. Assessment can then focus on the learner's writing process as well as the final text. AI should help learners understand and improve their writing, not conceal whether they can perform the task themselves.

2.6 Grammar Instruction and Error Analysis

Grammar remains an essential component of language proficiency because grammatical knowledge contributes to clarity, precision and effective communication. AI applications can explain grammatical structures, generate exercises and offer examples adapted to different proficiency levels.

Learners may request explanations of articles, prepositions, subject-verb agreement, tense usage, conditional sentences or reported speech. They can also compare correct and incorrect examples and ask why a particular construction is inappropriate in a given context.

Teachers can use AI to develop diagnostic quizzes and identify common error categories in learner writing. This may assist lesson planning by revealing patterns that require further instruction. Nevertheless, AI-generated grammatical explanations should be checked for accuracy and contextual appropriateness. Grammar is not merely a collection of fixed rules; meaning, register, dialect and communicative purpose influence how language is used.

2.7 Lesson Planning and Instructional Material Development

AI can reduce the time teachers spend preparing certain instructional materials. Potential applications include generating lesson outlines, designing vocabulary activities, creating role-play scenarios, developing comprehension questions and adapting texts for different proficiency levels.

For example, a teacher preparing a lesson on formal communication may ask an AI system to produce examples of professional emails, identify common features and create revision exercises. The teacher can then evaluate the material, correct errors and align the lesson with the intended learning outcomes.

AI may also assist in developing formative assessment questions and differentiated classroom tasks. However, efficiency should not be measured solely by the speed of content production. Teachers must consider whether the materials are accurate, culturally appropriate, accessible and suitable for their learners. The professional judgement of the teacher remains central to instructional quality.

3. PEDAGOGICAL BENEFITS OF ARTIFICIAL INTELLIGENCE IN ENGLISH LANGUAGE EDUCATION

3.1 Immediate and Individualised Feedback

A major advantage of AI-supported learning is the possibility of receiving feedback immediately after completing a task. In conventional classrooms, teachers may be unable to provide detailed individual comments on every learner's speaking or writing performance. AI applications can offer preliminary corrections and explanations, allowing learners to identify possible errors while the learning activity remains fresh in their memory.

Immediate feedback may encourage learners to experiment with language, revise their responses and recognise recurring difficulties. Nevertheless, the usefulness of feedback depends on its accuracy and explanatory quality. Corrections should be accompanied by reasons and opportunities for revision rather than accepted automatically.

3.2 Promotion of Learner Autonomy

AI can support independent learning by enabling students to practise English outside formal classroom hours. Learners can establish personal goals, review difficult concepts, complete additional exercises and monitor their progress. Such opportunities are particularly valuable for students who have limited access to individual tutoring. Learner autonomy, however, requires more than access to technology. It involves setting objectives, selecting appropriate resources, evaluating progress and taking responsibility for learning. Teachers should therefore guide students in developing effective prompting strategies, checking information and reflecting on their performance. The ultimate objective is to develop independent language learners rather than habitual users of automated assistance.

3.3 Increased Confidence and Reduced Communication Anxiety

Some learners hesitate to speak English because they fear negative evaluation or embarrassment. Conversational AI may provide a less intimidating environment in which they can practise unfamiliar expressions and repeat speaking tasks. The ability to pause, request clarification and restart a conversation can make practice more accessible.

This potential benefit should not be interpreted as evidence that AI eliminates language anxiety for all learners. Some students may prefer interaction with supportive teachers and peers, while others may find automated conversations unnatural. AI-based practice is most effective when it complements a classroom culture that treats mistakes as a normal part of learning.

3.4 Support for Inclusive and Differentiated Instruction

AI can help educators prepare learning materials that accommodate different proficiency levels and learning requirements. Text simplification, alternative explanations, speech-to-text functions and text-to-speech tools may improve access for some learners, including those who face reading or writing difficulties.

In multilingual classrooms, translation and bilingual explanations can help learners understand unfamiliar concepts before practising them in English. However, accessibility features must be evaluated for accuracy, usability and compatibility with individual needs. Unequal access to devices, connectivity and paid applications may also prevent the benefits of AI from reaching all learners.

4. CHALLENGES AND LIMITATIONS OF AI IN ENGLISH LANGUAGE TEACHING**4.1 Accuracy and Reliability of Generated Content**

Generative AI systems produce responses based on learned statistical patterns and other computational processes. Their outputs can appear convincing even when explanations are incomplete or incorrect. In language education, this may result in inappropriate vocabulary recommendations, inaccurate grammatical rules, unnatural expressions or misleading information about language conventions.

The risk is particularly significant when learners lack sufficient proficiency to evaluate the response independently. Teachers should encourage learners to verify explanations through reliable dictionaries, grammar references and established learning materials. AI-generated content should be treated as a resource requiring evaluation rather than an unquestionable authority.

4.2 Overdependence and Reduced Independent Learning

When AI produces complete essays, summaries or answers, learners may bypass the cognitive activities required for language development. Frequent dependence on generated text can reduce opportunities to retrieve vocabulary, organise ideas, practise sentence construction and learn from mistakes.

This challenge cannot be addressed simply by prohibiting all AI use. Instead, instructional tasks should distinguish between productive assistance and inappropriate substitution. Learners can be asked to draft independently, use AI for feedback, revise their work and explain the reasoning behind their revisions. Such activities preserve learner responsibility while allowing access to technological support.

4.3 Academic Integrity and Authorship

AI-generated writing creates difficulties for conventional assessment because a polished submission may not accurately represent the learner's independent competence. The use of AI also raises questions about authorship, acknowledgement and the appropriate boundaries of assistance.

Educational institutions should establish clear policies specifying when AI may be used for brainstorming, grammar correction, language practice and editing. Where disclosure is required, students should explain the nature of the assistance received. Assessment should also incorporate supervised writing, oral explanations, classroom tasks and reflective portfolios to provide a more reliable picture of individual learning.

AI-detection tools should not be treated as definitive evidence of misconduct. Decisions concerning academic integrity require contextual examination, transparent procedures and appropriate opportunities for students to respond.

4.4 Digital Inequality and Accessibility

The educational benefits of AI depend partly on access to suitable devices, reliable internet connections and applications with appropriate functionality. Learners in under-resourced institutions may be unable to use the same tools as their better-resourced peers. Subscription fees, language limitations and inaccessible interfaces can further widen existing educational inequalities.

Institutions should avoid making access to expensive AI applications a prerequisite for academic success. Alternatives should be available through institutional facilities, low-bandwidth resources, teacher-provided materials and conventional learning activities. AI integration should expand educational opportunities rather than create new barriers.

4.5 Cultural and Linguistic Bias

AI systems may favour particular varieties of English, communication styles or cultural assumptions. Automated feedback may treat legitimate regional expressions as errors or recommend language that is grammatically acceptable but socially inappropriate in a particular context.

English is used across diverse linguistic communities, and effective communication does not require every learner to imitate a single accent or cultural style. Teaching should distinguish genuine linguistic errors from differences in dialect, register and communicative preference. Human teachers are essential in helping learners understand these distinctions.

5. CHANGING ROLE OF THE ENGLISH LANGUAGE TEACHER

The integration of AI does not eliminate the need for teachers; rather, it changes the range of responsibilities associated with effective instruction. Teachers increasingly need to combine linguistic expertise, pedagogical judgement, digital literacy and ethical awareness.

First, teachers act as learning designers who select suitable AI applications and integrate them into lessons with clear objectives. They determine whether a particular tool supports the intended skill and whether its use is appropriate for the learners' proficiency levels.

Secondly, teachers function as critical evaluators of AI-generated content. They verify grammatical explanations, review learning materials and identify cultural or contextual inaccuracies. This responsibility is especially important when students cannot independently assess the reliability of the information they receive.

Thirdly, teachers become facilitators of communicative learning. Although AI can simulate conversations, classroom interaction offers opportunities for collaboration, negotiation of meaning, empathy and spontaneous communication. Teachers should create activities in which students use the language practised with AI in authentic social and academic contexts.

Finally, teachers serve as mentors in ethical and independent learning. They help learners understand appropriate AI use, protect personal information, acknowledge assistance when required and maintain responsibility for their own work.

Teacher preparation must consequently extend beyond technical familiarity with applications. Professional development should include prompt design, evaluation of generated feedback, assessment redesign, privacy awareness and strategies for integrating AI with established language-teaching methods. Institutional support is necessary to ensure that these responsibilities do not become an additional burden without adequate training or resources.

6. RECOMMENDATIONS FOR EFFECTIVE IMPLEMENTATION

The preceding analysis suggests several measures for educational institutions, teachers and curriculum developers.

1. Integrate AI selectively. AI should be used where it serves a clear learning objective, rather than being introduced into every activity merely to demonstrate technological innovation.
2. Develop AI literacy among teachers and students. Training should cover prompt construction, verification of information, recognition of limitations, privacy protection and responsible academic use.
3. Preserve independent language production. Learners should regularly complete speaking and writing tasks without automated assistance so that teachers can assess their actual proficiency.
4. Redesign assessment practices. Institutions should combine classroom performance, supervised tasks, portfolios, oral examinations and reflective assignments to obtain a more comprehensive picture of learning.
5. Establish clear institutional policies. Guidelines should explain permitted uses, disclosure requirements, data-protection expectations and procedures for addressing academic-integrity concerns.
6. Promote equitable access. Universities and schools should consider free or institutionally supported resources and provide non-digital alternatives where technological access is limited.
7. Evaluate educational effectiveness. Institutions should assess AI-supported instruction using appropriate learning outcomes, learner feedback and comparisons with relevant teaching approaches, rather than relying exclusively on satisfaction or usage statistics.
8. Encourage research across diverse contexts. Studies should examine different age groups, proficiency levels, educational settings and varieties of English, including learners in multilingual and resource-constrained environments.

7. RESEARCH GAPS AND FUTURE DIRECTIONS

Despite growing scholarly interest, several questions remain unresolved. A substantial proportion of emerging research examines immediate learning experiences, perceptions or performance on specific tasks. These outcomes are useful, but they do not necessarily demonstrate sustained improvement in language proficiency. Longitudinal studies are required to determine whether AI-supported practice produces durable gains after the technology is withdrawn.

Further investigation is also needed into the quality of AI-generated feedback. Researchers should examine whether corrections are accurate, whether learners understand the explanations and whether repeated exposure improves their ability to identify errors independently. Such studies could compare automated feedback, teacher feedback and carefully designed combinations of the two.

Another important research direction concerns differences among learners. AI may benefit students with strong digital literacy differently from those who have limited technological experience. Research should therefore examine how proficiency, motivation, language background, disability and access to technology influence learning outcomes.

Assessment practices also require empirical scrutiny. Studies should investigate how AI affects the validity of writing assessments, the reliability of independent proficiency measures and the relationship between assisted performance and unaided competence.

Finally, future research should examine the role of teachers as mediators of AI-supported learning. The central question is not merely whether students use AI, but how instructional design influences the quality of that use. Comparative classroom studies, mixed-methods research and carefully controlled interventions can help clarify which combinations of AI assistance and human instruction are most effective for particular language-learning objectives.

8. CONCLUSION

Artificial intelligence is creating new possibilities for English language teaching and learning by facilitating personalised practice, conversational interaction, automated feedback and the development of differentiated instructional materials. Its applications extend across speaking, listening, reading, writing, grammar and vocabulary, providing learners with additional opportunities to practise language beyond the boundaries of the traditional classroom.

The educational value of these applications depends on the relationship between technological capability and sound pedagogical design. AI can make feedback more accessible and learning activities more adaptable, but it cannot guarantee accuracy, sustained acquisition or effective communication. Uncritical reliance on generated answers may weaken independent learning, while concerns about privacy, academic integrity, cultural bias and digital inequality require deliberate institutional responses.

Teachers therefore remain central to effective English language education. Their expertise is required to select appropriate resources, interpret learner needs, verify automated feedback, facilitate meaningful interaction and assess independent competence. A human-centred model of AI integration should combine technological assistance with communicative teaching, critical thinking and opportunities for learners to produce language independently.

The principal implication is that AI should be understood as a means of strengthening educational practice rather than as a substitute for human teaching. Its successful integration requires teacher preparation, transparent institutional policies, equitable access and ongoing evaluation of learning outcomes. Future research must establish more clearly which applications produce lasting improvements, for which learners and under what instructional conditions. Such evidence will help educational institutions make informed decisions about the role of AI in developing confident, competent and autonomous users of English.

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