TRANSFORMING AI IN ENGLISH LANGUAGE LEARNING: A SYSTEMATIC LITERATURE REVIEW

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Abstract. AI technology is changing the way the world learns English with adaptive, interactive and data-driven learning in various context. This review draws on new evidence to explore AI-supported English language learning with attention to learner outcomes, engagement and implementation challenges. The aims of the study are to assess the impact of AI-driven tools on core language competences, understand how AI captures motivation and engagement as well as uncover potential prospects for and barriers to integrating AI in English education. A systematic review of the literature for studies published from 2020-2025 was conducted through PRISMA-guided screening of peer-reviewed articles identified through major databases with data extracted on study design, participant characteristics, AI tool(s), outcomes and contextual factors. The findings show that AI-mediated interventions accelerate the development of listening, speaking, reading and writing skills as well as motivation and autonomy through immediate, personalised feedback and multimodal tasks. When AI supports context-driven learning or differentiation, the benefits are highest. However, concern persist regarding data privacy and reliability of AI-based feedback, overreliance on such systems, inequalities in access and continued teacher training remain. The concluding section emphasizes the potential of AI for scalable, engaging language learning provided is done ethically, evaluated rigorously with fair access and ongoing professional development.
Keywords: *artificial intelligence, English language, learning, education*

Introduction

Artificial Intelligence (AI) has come to be a disruptive force in education in recent years, particularly in the field of second language (L2) instruction in education. Nowadays, the integration of artificial intelligence (AI) in English Language Acquisition (ELA) has obtained strong impact due to the progress in natural language processing (NLP), machine learning (ML) and adaptive learning systems (Zawacki-Richter et al., 2019). Some of the AI-based tools that are popular which include chatbots, ChatGPT and other personalized learning platforms. Indeed, those tools that specify for vocabulary and grammar building, pronunciation teaching and learning as well as reading comprehension are more frequently employed for English learners (Zhang and Zou, 2022). On the other hand, the transition from face-to-face instruction to online models due to the COVID-19 pandemic awakens the application of AI technologies in the education of language (Xolboyeva, 2025; Moorhouse et al., 2023). Donmez (2024) as well as Wang et al. (2024) mentioned that these instruments have potential advantages in providing immediate feedback, learner autonomy and also personalised instruction to facilitate both students' and teachers' desired learning goals.

Although AI in English language learning has been growing rapidly, the empirical evidence on its impact on learners' proficiency, motivation and long-term engagement is limited. Though some evidence of this being useful (Essien et al., 2024) or warning that too much AI-based work would decrease teacher-student interaction and critical

thinking (Shukor and Osman, 2025; Castillo, 2024). Critical thinking is one of the challenges that social scientists are beginning to deal with in face-to-face classes and others are likely tasking these in the virtual setting seeing that critical thinking cultivates a skill set for the student that is useful for meeting new challenges and solving old problems. Furthermore, implementation difficulties including technical issues, cost constraints, training insufficiencies and ethical issues remain obstacles to the successful application of AI in educational contexts (Donmez, 2024). Although there is an increase of number of literature that investigates the application of AI in education but there is limited research has systematically surveyed the current studies on the role of AI in ELA especially related to learners' motivation, engagement and contextual challenges in actual educational settings (Mohamed et al., 2025; Wei, 2023). The existing evidences are by and large exploratory or focused on certain aspect of AI application and provide only a limited insight for the potential of disruptive AI in a variety of learning conditions.

This research underlines the importance of conducting a systematic review of the literature on the ways that AI is transforming English L2 teaching and learning in terms of not only the cognitive and pedagogic issues but also the technical and institutional ones. This gap in evidence will be filled and informed stakeholders with recommendations to address uncertainties. This study aims to see recent academic findings on the application of AI in the field of English language learning. The study hopes to explore the effect of AI on learning, investigate the impact of AI tools on learners' engagement, motivation and interest as well as examine the opportunities and challenges as to the implementation of AI in teaching English. A systematic overview of the evidence is needed to determine the overall value of AI in ELA and discuss the learner experience with AI-driven tools as well as explore the challenges and the possibilities of AI tools. Hence, this study proposed three research questions: (1) What is the impact of AI on English language acquisition among learners? (2) How do AI-based tools influence learners' engagement and motivation in learning English? (3) What are the key challenges and opportunities in implementing AI technologies for English language acquisition in education setting?

Literature review

Review studies on AI-enhanced learning and learning languages

Some systematic reviews have explored the application of AI in English teaching and learning. For example, Sharadgah and Sa'di (2022) reviewed 200 articles between 2015 and 2021 and selected 64 for analysis. Their results showed that AI could be used in the context of English language teaching (ELT) with positive impacts on the English language skills, translation, assessment, recognition, attitude and satisfaction. AlTwijri and Alghizzi (2024) also carried out a systematic review, with a view to investigating whether AI technologies could be effectively integrated to boost EFL learners' motivation, engagement and attitude as well as minimise learning anxiety. They concluded that despite being a new horizon in EFL settings, there is a high demand for more research to investigate the effect of AI embedded courses on EFL students' affective dimension (AlTwijri and Alghizzi, 2024).

Review studies on the use of AI tools and apps in language learning

The successful use of individual AI applications in language learning have been illustrate in different empirical researches. Wei (2023) used a mixed method approach with 60 university students and found that English language learners who received AI-mediated instruction significantly out-performed in terms of grammar, reading comprehension and vocabulary scores as well as writing quality. Furthermore, these students had higher L2 motivation and were more likely to use self-regulated learning strategies (Wei, 2023). Research has also demonstrated the transformative powers of AI platforms like ChatGPT and Duolingo. For example, Niyozov et al. (2023) found significant enhancements in language skill and engagement among students with the use of ChatGPT where vocabulary scores increased by 25% and grammar comprehension by 19%. The focus of the study was on ChatGPT's congruence with instructional design principles of interactivity and personalization (Niyozov et al., 2023).

Review studies on the impact on educational achievement and student engagement

Language learning results have been improved by AI technologies that offer personalization and adaptivity in learning. The study conducted by Wei (2023) also revealed that AI-instructed teaching approach not only led to an enhancement of academic outcomes but also an elevation of the level of student engagement and autonomy (Wei, 2023). AI-based systems such as Duolingo are also being praised for their effectiveness in providing adaptive and personalized language learning (Wei, 2023).

Materials and Methods

The review and analysis of this study were conducted systematically based on the articles that retrieved from Scopus database within the period of 2020 to 2025. The Preferred Reporting Items for Systematic Review and Meta- Analyses (PRISMA) which consists of 27 item checklist and 4- phase flow diagram is employed in this study. The purpose of implementing PRISMA in this study is to identify inclusion and exclusion criteria in finding related articles and also to examine large databases of literature review in a certain period. Hence, the data collected through 4 phases which are identification phase, screening phase, eligibility phase and also inclusion phase.

Phase 1: Identification phase

In this study, the electronic database used to review and analyse the article that suit this study is Scopus. Scopus is a commercial abstract and citation database that developed and maintained by Elsevier that provides access to bibliographic information, abstracts and citations form over 77 millions records. It is also a large and comprehensive research tool for researchers. The keywords used while examining the articles from Scopus were “artificial intelligence”, “learning”, “English” “language”, “acquisition”, “young learners” and “students”. The search identifies 66 articles from Scopus. These keywords were typed together to narrow the scope and to prevent irrelevant information. The articles were screened according to the year of publication, language and literature type.

Phase 2: Screening phase

This phase is done to filter and eliminate articles that are repeated and find the suitable articles that fulfil the criteria set earlier before. The articles that do not support full access will be eliminated as well. At the end, a complete reference list of selected 65 articles with around will be taken and been used for the next phase.

Phase 3: Eligibility phase

The conditions of eligibility and exclusion has been listed out (*Table 1*) to identified the articles that can be used for this study. Firstly, the literature. Type selected must be only articles in English language only that is within the year 2020 to 2025. The subject area that covered the articles are Social Science and the keyword "Artificial Intelligence AI" must be included into searching suitable articles. The literature type that is apart from articles and other languages will be excluded. Articles that is published before 2020 will be eliminated too. On the other hand, articles that is other than social science will be eliminated as well.

Table 1 *The eligibility and exclusion criteria.*

Criterion	Inclusion criteria	Exclusion criteria
Literature type	Articles	Proceeding, book series, reviews, non- journals, abstracts
Language	English	Non- English
Years of publication	2020-2025	< 2020
Subject area	Social Science	Other than social science
Keywords	Artificial Intelligence AI	-

Phase 4: Inclusion phase

There were 10 articles that fulfil the criteria and believed to provide meaningful data for this study by using the content analysis approach. The data chosen were also based on reading the abstracts and continue with analysing the whole articles to identify the themes that suit this study, The qualitative analysis has been conducted to identify themes about the role of AI in ELA. The table below shows the identity of articles which are qualified for the synthesis process (*Table 2* and *Figure 1*).

Table 2*. The identity of the articles which are qualified for the synthesis process*.

No	Author (s)	Title
1.	Zhang and Umeanowai (2025)	Exploring the transformative influence of artificial intelligence in EFL context: A comprehensive bibliometric analysis
2.	Chen et al. (2022)	Robot- Assisted Language Learning: Integrating Artificial Intelligence and Virtual Reality into English Tour Guide Practice
3.	Mohammadkarimi (2024)	Exploring the Use of Artificial Intelligence in Promoting English Language Pronunciation Skills
4.	Alqaed (2024)	AI in English Language Learning: Saudi Learners' Perspectives and Usage
5.	Al-Smadi et al. (2024)	Artificial Intelligence for English Language Learning and Teaching: Advancing Sustainable Development Goals
6.	Zakarneh et al. (2025)	Revolutionizing Language Learning through ChatGPT: An Analysis of English Language Learners
7.	He (2024)	The Metaphor of AI in Writing in English: A Reflection on EFL Learners' Motivation to Write, Enjoyment of Writing, Academic Buoyancy, and Academic Success in Writing
8.	Çelik et al. (2024)	Does AI Simplification of Authentic Blog Texts Improve Reading Comprehension, Inferencing, and Anxiety? A One- Shot Intervention in Turkish EFL Context
9.	Kurt and Kurt (2024)	Enhancing L2 Writing Skills: ChatGPT as An Automated Feedback Tool
10.	Polakova and Klimova (2024)	Implementation of AI- driven Technology into Education- A Pilot Study on the Use of Chatbots in Foreign Language Learning

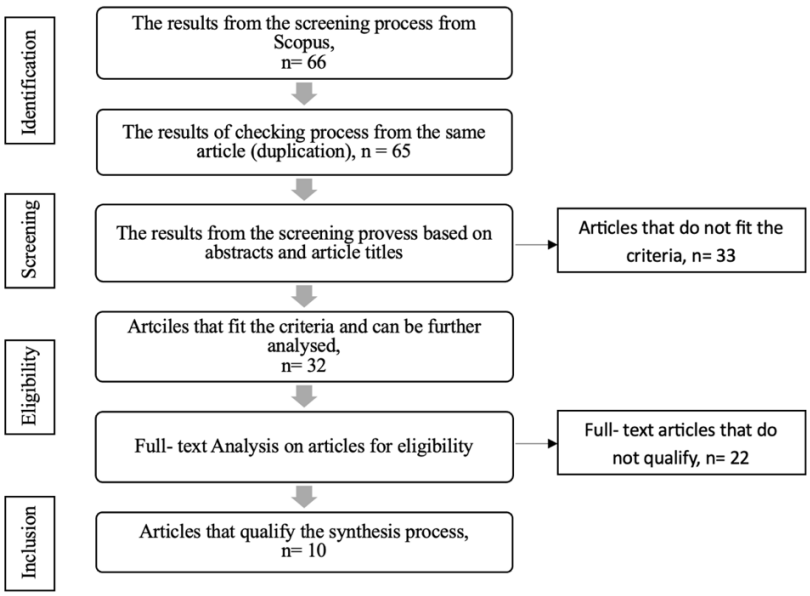

Figure 1. *The systematic process pf reviewing the resources.*

Results and Discussion

Impact of AI on English language acquisition

Improved language skills and ability

AI-driven instruments such as ChatGPT, automated writing evaluation (AWE) systems and pronunciation platforms have shown strong positive effects on learners' listening, speaking, reading and writing English language skills (Zakarneh et al., 2025; Çelik et al., 2024; He, 2024). According to the studies by Zhang and Umeanowai (2025), Polakova and Klimova (2024), more than 80% of the respondents in their studies had learned new skills and recommended integrating AI products. Empirical evidence by Zakarneh et al. (2025), Alqaed (2024) as well as Mohammadkarimi (2024) demonstrate that learners learning AI systems claim to have a better grammar, vocabulary learning, pronunciation correctness and overall communication skill preparations than those who only use traditional methods of learning. This is because when using AI applications, learners receive immediate and personalised feedback which helps them to identify and correct their mistakes which leads to better academic achievement and greater language confidence (Zakarneh et al., 2025; Al-Smadi et al., 2024; Chen et al., 2022). Another evidence by Kurt and Kurt (2024) is that both ChatGPT and other AI-enhanced feedback systems enhanced participants' writing skill which offer instant corrections and structural tips such as the content, coherence as well as linguistic accuracy. Polakova and Klimova (2024) as well as Huang et al. (2021) also reported that virtual reality and AI chatbots such as ChatGPT were used for learning vocabularies with the integration of situational context that offer immersive experiences (Polakova and Klimova, 2024; Huang et al., 2021).

Personalised and adaptive instruction

Apart from that, AI technologies can provide personalised learning experiences by customizing content, feedback and pacing according to the learners' specific needs

strengths, and weaknesses of each learner (Zakarneh et al., 2025; Kurt and Kurt, 2024; Polakova and Klimova, 2024). By having such personalisation, it provides comparative independence for learners to work on targeted areas for improvement and at their preferred tempo in order to achieve more efficient and effective language learning (Zakarneh et al., 2025; Zhang and Umeanowai, 2025; Polakova and Klimova, 2024).

Raise engagement, motivation and fun

The interactivity of AI tools such as chatbots and gamified platforms boost students' engagement, motivation and fun in foreign language learning activities (Çelik et al., 2024; He, 2024; Chen et al., 2022). Studies by Zakarneh et al. (2025) and He (2024) indicate that students describe AI as providing a non-threatening, positive and nonjudgmental learning environment that minimises their anxiety. In the other way of saying, students feel more comfortable with error making in learning English and they feel more motivated to do so (Zakarneh et al., 2025; He, 2024). For example, the virtual remote tools such as "Pokemon Go" made language practice as an interactive exercise which encourage users to continuously engage (Huang et al., 2021). Another evidence to support this point is the study by Kurt and Kurt (2024) that the adaptive feedback in ChatGPT was adjusted based on each learner's proficiency to provide a more targeted and confidence-boosting learning experience (Kurt and Kurt, 2024).

Increase accessibility and inclusivity

Based on Zakarneh et al. (2025), language AI tools provide access to high quality resources and virtual tutors 24 hours a day and 7 days a week. Therefore, language gaps for learners in marginalised or remote settlements can be addressed. Through the democratisation of access to language learning opportunities, AI facilitates more equity and inclusivity in English language education (Zakarneh et al., 2025). This statement can also be supported by Kurt and Kurt (2024) where AI made it user- friendly and available anytime which users also like the instant feedback provided by ChatGPT. Besides, AI tools also offer access to high-quality language resources and virtual tutors constantly and address educational insufficiency in rural areas (Al-Smadi et al., 2024; Zakarneh et al., 2025). In fact, democratisation of access to language learning opportunities AI-driven equity and inclusion by encouraging more learners to access effective language learning outside of traditional educational settings and across diverse contexts such as geography and social status (Al-Smadi et al., 2024; Chen et al., 2022).

Provide contextualised learning space

Moreover, Zakarneh et al. (2025) also reported that AI-driven platforms combine text, audio, video and interactive activities to create multimodal practices that simulate real world interaction. These activities are meant to help learners develop language in use in authentic-like situations or their real life situation (Zakarneh et al., 2025). For example. AI systems with formative feedback mechanisms include combining text, audio, video with interactive exercises to provide multimodal learning contents that resemble real-life communication events (Çelik et al., 2024). These contextualised tasks then enable learners to build functional language that fits the real world by using English in relevant tasks (Zakarneh et al., 2025). Polakova and Klimova (2024) also highlighted that dialogic interaction with chatbots was compared to human conversations which enrich contextual learning (Polakova and Klimova, 2024).

AI-based tools influence learners' engagement and motivation in learning English

Engagement and active participation

Throughout the findings, platforms that provides AI features are significantly related to higher learner engagement. AI tools such as Chatbots, virtual tutors and other gamified language applications have interactive elements which promote students' active engagement, pull their attention and encouraged self-paced learning (He, 2024; Polakova and Klimova, 2024). According to He (2024) and Mohammadkarimi (2024), both studies stated that students gave their opinion that using AI tools make language practice more fun and less intimidating especially when they are practicing speaking or writing with a "robot" . Besides, there are some studies (Zakarneh et al., 2025; Alqaed, 2024; Çelik et al., 2024; He, 2024; Mohammadkarimi, 2024) mentioned that AI-enabled platforms provide interactive and personalised student-centered learning that can improve students' engagement and autonomy as well as create personalised recommendation to students. By providing immediate feedback, personal training and gamification learning becomes fun and a way of life (Zakarneh et al., 2025; Alqaed, 2024; He, 2024). Polakova and Klimova (2024) as well as Chen et al. (2022) highlighted that AI-enable platforms are not only live learner engagement tools but they also offer interactive, immersive and gamified experiences to keep the learner engaged. At the same time, learners might have the chance to visit virtual worlds, engage in role-plays, make friends with avatars or robots which makes English learning an active, engaging and motivating experience (Chen et al., 2022). Chen et al. (2022) also indicates learners' higher chance to maintain the performance in language tasks, be active and make effort through AI activities where the activities mimic real communication and real problem-solving activities in daily lives. In addition, robot-assisted language learning (RALL) applications that combine AI technology and robots have proven that those tools are very effective in increasing students' learning behavioural, affective and cognitive engagement (Chen et al., 2022). Hence, elements like real time feedback, adaptive difficulty or personalised challenges maintain learners motivation and focus during their studies (Polakova and Klimova, 2024; Chen et al., 2022).

Motivation

On the other hand, the motivational aspects of AI in language learning are the focus of empirical works. Automatic providing feedback tools which include automated writing evaluation tools and chatbots generate direct constructive feedback where it is believed to raise students' confidence and foster their motivation for improvement (Zakarneh et al., 2025; Polakova and Klimova, 2024). In experimental situations, students that received a combination of traditional instruction and AI based writing evaluation to be more motivation and interest in AI rather than those who received conventional instruction only (Zakarneh et al., 2025; Kurt and Kurt, 2024). Besides, AI tools also contribute to learners' autonomy by encouraging them to progress at their own pace, select topics of interest and receive personalized feedback. This sense of control and personalisation is closely associated with learner intrinsic motivation and attitudes towards language learning. Furthermore, studies also found that AI tools have been found to enhance learners' motivation to learn English due to the immediate feedback, personalised practice exercises and self- paced learning (Zakarneh et al.,

2025; Alqaed, 2024; Çelik et al., 2024; He, 2024; Mohammadkarimi, 2024). He (2024) and Mohammadkarimi (2024) also stated that AI such as in writing and pronunciation learning can increase learners' pleasure and motivation in participating in language activities. The reason is that students can see improvements visually and can closely monitor their progress which help them to feel successful (Alqaed, 2024; Mohammadkarimi, 2024). On top of that, gamification in AI-driven tools uses elements of games such as providing rewards, badges, leaderboards and progress tracking to enhance learners' motivation and interest in language learning (Polakova and Klimova, 2024; Chen et al., 2022). The direct and positive feedback learners receive by AI-based systems can be very stimulating, as it allows learners to feel appreciate the efforts that they have done, identify their own mistakes and they will feel a sense of an achievement (Chen et al., 2022; Polakova and Klimova, 2024). For example, students who access AI chatbots show a positive experience and the perceived distance associated with the setting is less intimidating compared to being in a class (Polakova and Klimova, 2024). Studies by Polakova and Klimova (2024) suggest that AI can help in stimulating learners' inquisitiveness and intrinsic motivation by changing the role of language learning from passive function into an active self-motivated attempt. Devices that do not allow learners to see their progress or receive personalised suggestions simply do not seem for the ability to monitor progress visually and to personalise learners' recommendations further increases their sense of agency and ownership over the learning process (Al-Smadi et al., 2024; Kurt and Kurt, 2024; Chen.et al., 2022).

Reducing anxiety and supporting the needs of different learners

Findings also show that AI tools foster a supportive, low-anxiety learning atmosphere to the learners by providing individual, nonjudgmental spaces for practicing and experimenting (Kurt and Kurt, 2024; Polakova and Klimova, 2024; Chen et al., 2022). Shy, anxious and reluctant language learners that have been provided with AI-mediated language tools often seen as less threatening and stressful if compare to traditional learning environments (Polakova and Klimova, 2024; Chen et al., 2022). Kurt and Kurt (2024) as well as Chen et al. (2022) also reported that providing opportunity to work toward mastery at one's own pace and receiving immediate feedback from a digital tool with repeatable tasks will encourages confidence and reduce learners' pressure. Furthermore, the studies also highlighted that AI may cater to various learning styles, preferences and requirements as well as offers the potential for greater inclusivity and equity in language learning (Zhang and Umeanowai, 2025; Al-Smadi et al., 2024). Moreover, numerous studies show that a broad sense of language learning anxiety is relieved by the AI processes especially in speaking and writing (Çelik et al., 2024; He, 2024; Mohammadkarimi, 2024; Polakova and Klimova, 2024). Language learners may be more confident practicing a language and less worried about error when talking to Ais if compared to talking with English teachers or to peers face to face (Mohammadkarimi, 2024). Mohammadkarimi (2024) mentioned that the decrease in anxiety creates a more supportive context for risk and language learning.

Challenges and opportunities in AI and learning English

Challenges

Data privacy and ethnical considerations

According to Al-Smadi et al. (2024), the use of AI in education affect significantly in ethical and privacy concerns. This study also stated that students and educators were worried about how AI systems collect, store and use their personal data. Hence, it is the responsible AI that should ensure transparency, informed consent and robust data protection (Al-Smadi et al., 2024). Apart from that, the collection and use of personal data is are the ethical and privacy concerns and these issues need to be addressed with clear policies and strong data security provisions in order to preserve users privacy and reduce the exposures of information and associated vulnerabilities of AIs (Al-Smadi et al., 2024). AI implementation raises significant ethical issues around data privacy, academic integrity, algorithmic bias, as well as potential for plagiarism or abuse of generative tools (Zakarneh et al., 2025; Alqaed, 2024; Mohammadkarimi, 2024). Hence, among 10 articles, 3 articles highlighted that significant action towards guidelines, transparency and responsible use policies are needed to minimize the risks (Zhang and Umeanowai, 2025; Al-Smadi et al., 2024; Kurt and Kurt, 2024).

Reliability and accuracy of AI feedback

Although AI-based feedback bring benefits especially to learners and educators, however the study by Kurt and Kurt (2024) mentioned about the feedback given were inconsistent, inaccurate as well lack of understanding the context. Students and teachers were caution against the full trust on feedback from AI so it is important to emphasize the need for human oversight and should critically think about it (Kurt and Kurt, 2024). The study by Kurt and Kurt (2024) gave an example on problems that encounter when using AI was that AI tools may encounter problems with nuanced language such as idiomatic expressions, cultural references or complex argumentative structures (Kurt and Kurt, 2024). This can be supported by another study by Alqaed (2024) that learners could become over rely on AI tools which might affect the process of developing creativity , critical and original production of language among learners. Hence, there are still concerns remain about the accuracy, reliability and contextual adequacy of feedback generated by AI especially in respect to those elements of language use and pragmatic competence that include nuances of language use, cultural references as well as pragmatic competence (Zhang and Umeanowai, 2025; Kurt and Kurt, 2024).

Reliability and low critical thinking

According to the study by Kurt and Kurt (2024), a common concern is that students might become too rely on AI tools for the use of language production, editing and translating. It also highlighted that overuse of the AI tools for these purposes can pose a barrier for independent thinking, creativity and genuine language use (Kurt and Kurt, 2024). This statement can be supported by the study by Al-Smadi et al. (2024) where over-relying on AI may undermine independent language, critical thinking and creativity while the ESL students can become passive recipients of automated feedback. For instance, educators should choose a balanced approaches when using AI as supplemental support rather than a replace humans by AI tools in instruction and interaction (Kurt and Kurt, 2024).

Accessibility and equity

Although AI has the potential to change, inequalities still exist in accessing to technology and internet as well as digital literacy (Al-Smadi et al., 2024). Al- Smadi et

al., 2024 reported that students in low resource context may have difficulty to have access to advanced AI tools that enhance educational inequality. It is a necessary to encounter the gap by investing in infrastructure as well as provide training and support where it is needed (Al-Smadi et al., 2024). Examples given by the studies (Kurt and Kurt, 2024; Chen et al., 2022) where learners and teachers may have trouble understanding AIs' feedback, information navigation or trouble-shooting system errors especially when they do not mastered the use of technology skills required. Hence, Zhang and Umeanowai (2025) as well as Chen et al. (2022) mentioned that variations among text data learners which include abilities as users of technology, adaptation to language and technology use may impact AIs tools and bias in use. So, they suggest that it is important to provide support and training to the users (Zhang and Umeanowai, 2025; Chen et al., 2022).

Teacher training and professional development

Successful integration of AI in language education depends on teachers' digital literacy, pedagogical knowledge and readiness to innovate into their teaching (Al-Smadi et al., 2024). Based on the study conducted by Al-Smadi et al. (2024), several teachers have expressed that they need for more training, support and confidence so that they can use AI tools in their teaching. Hence, this study suggested that continuous teacher professional development and the use of professional learning communities are essential in capacity building for best practice (Al-Smadi et al., 2024).

Opportunities

Enhanced personalisation and differentiation

Despite many challenges in using AI in English learning, however, AI provided opportunities to both learners and educators too. One of it is that AI supports personalised learning by providing educators with the capability to offer differentiated instruction that align to the needs, preferences and progress of every learner (Zhang and Umeanowai, 2025; Al-Smadi et al., 2024). Both studies by Zhang and Umeanowai (2025) as well as Al-Smadi et al. (2024) also stated that adaptive learning systems can detect knowledge gaps and propose related resources and scaffold learning paths. This will help different learners to accomplish their goals in learning. For example, AI helps to customises material, feedback and pacing to each student hence they enable differentiated instruction and inclusive education in English learning (Al-Smadi et al., 2024; Kurt and Kurt, 2024; Polakova and Klimova, 2024).

Highly scalable and cost- effective solutions

According to the study by Al-Smadi et al. (2024), AI-driven platforms provide cost-effective scalable solutions for language learning, especially in areas where there are limited of human resources. It also stated that automated feedback, tutoring and assessment systems with intelligence capabilities allow the ease of delivery of education to spread all around the world without any reduction in quality (Al-Smadi et al., 2024). In fact, AI resources offer the possibility of delivering access to high quality language content for learners in both remote and resource poor areas and support the implementation of large scale language programs (Zhang and Umeanowai, 2025; Al-Smadi et al., 2024;).Besides, automation of routine tasks like grading, checking of error

and learners' progress tracking can allow educators to invest more time in some high-order teaching tasks and personal one-to-one feedback (Al-Smadi et al., 2024; Kurt and Kurt, 2024).

Innovative pedagogical approaches

According to the study by Al-Smadi et al. (2024), the incorporation of AI in education also provides opportunities for more creative pedagogical policies as flipped classrooms, blended learning and project based learning. Formative assessment, self-regulated learning and metacognitive reflection can be supported by AI tools which help learners to own their learning (Al-Smadi et al., 2024). Chen et al. (2022) also mentioned that the combined application of AI with robotics creates new collaborative student- centered learning that develops critical thinking, creativity and collaboration.

Professional development among educators

Al-Smadi et al. (2024) pointed out that AI technologies may also facilitate teacher with the provision of data-driven insights, tailored training modules and communities of practice. Through the use of AI in lesson planning, evaluation and feedback, teachers can improve their efficiency and effectiveness (Al-Smadi et al., 2024). For example, AI supported analysis gives teachers information about the students' progress and shows the teachers on the improvement that they needed help and act as a guide purposes for teaching (Al-Smadi et al., 2024; Chen et al., 2022).

Research and continuous improvement

According to Al-Smadi et al. (2024), the rapid increase of AI in language learning marketing and sales provide rich datasets for research and continual improvement. This would help in the development of evidence based psychological interventions towards attention deficit hyperactivity disorder (ADHD) and early identification and prevention of childhood ADHD (He, 2024). Such studies can inform evidence based practice and identify effective interventions as well as contribute towards policy plans (Al-Smadi et al., 2024).

Impact of AI on English language acquisition

All these findings reveal that AI technologies have now directly integrated into they key processes of English language acquisition and in determining how students acquire foundational skills in listening, speaking, reading, and writing (Zakarneh et al., 2025; Al-Smadi et al., 2024). Recent studies also shows that AI tools play a significant role in supporting English language acquisition in listening, speaking, reading and writing skills. Studies using AI-enhanced platforms such as ChatGPT, automated writing evaluation systems and pronunciation tools show that learners can gain benefits through using AI in their target language grammatical accuracy, vocabulary, retention, pronunciation and overall communicative competence. This really shows that the power of AI is not limited to practicing skills in isolation but in connecting them to communicative competence which is one of the main achievements in English language learning (Polakova and Klimova, 2024). For example, research revealed that more than 80% of students indicated that they learned new skills and promoted the integration of AI products into English programs (Zakarneh et al., 2025; Polakova and Klimova,

2024). Al-Smadi et al. (2024) and He (2024) supported that the importance of AI's capacity for individualised, real-time response in promoting academic success and language confidence is emphasized which enable the learners to detect and correct mistakes promptly.

Through embedding English input and output to interactive, contextualised activity, AI assists in the gap between language learning from classroom to life-world which is also a key challenge for traditional models of language acquisition (Chen et al., 2022; Huang et al., 2021).AI-supported educational environments also allow for more immersive and context-rich experiences with access to constructs such as virtual reality scenarios and chatbot interactions which help to embed vocabulary and grammar in realistic settings (Chen et al., 2022; Huang et al., 2021). In addition, AI-enabled differentiated instructions and adaptive learning paths have been proved to solve the gaps of individual learners by supporting more equitable education results and higher achievement of diverse learners (Zhang and Umeanowai, 2025; Al-Smadi et al., 2024).

Influence of AI- based tools on learners' engagement and motivation

Given that sustained engagement and intrinsic motivation are established predictors of language acquisition success, adopting AI-based interventions that facilitate these is essential to optimising learners' acquisition outcomes (He, 2024; Mohammadkarimi, 2024).AI functions especially AIs such as chatbots, virtual tutors and gamified applications are associated with enhanced student engagement and motivation. The literacy provides information that interactive and adaptability factors that encourage active participation and process giggles and make language learning enjoyable or providing fun learning environment to the learners (He, 2024; Mohammadkarimi, 2024). Polakova and Klimova (2024) as well as Chen et al. (2022) highlight that AI platforms' immediate feedback, game-based exercises and activities and role-play with avatars or robots offer a learner-friendly environment conducive to a wide range of personalized learning experiences.

A number of studies highlight that AI-inspired activities (mimicking context for interaction and real world problem-solving tasks) will motivate learners to do language tasks and actively participate while completing the task (Zakarneh et al., 2025; Alqaed, 2024). For instance, robot-assisted language learning (RALL) systems demonstrate significant gains in behavioural and cognitive engagement responses. Hence, AI applications are not simply pertinent to learner behaviour but they also facilitate cognitive and affective states that are conducive to better and deeper English language acquisition (Polakova and Klimova, 2024). Features like adaptive content difficulty and personalised challenges keep learners motivated and encourage more autonomy with respect to their own learning progression (Polakova and Klimova, 2024).

Opportunities and challenges in implementing AI for English teaching

Importantly, personalised and real-time adaptive instruction can help AI address persistent problems in the context of English language learning which is the diversity of proficiency levels and learner backgrounds as well as support equity access to outcomes (Zhang and Umeanowai, 2025; Al-Smadi et al., 2024). AI provides opportunities for personalised, inclusive and adaptive learning direction. AI-based analytics may help teachers personalise instruction and monitor progress and scaffolding learner development in real time (Zhang and Umeanowai, 2025; Al-Smadi et al., 2024). The

adaptive features of AI material and feedback enable individualising instruction and learning and thus make teaching and learning English more fair (Kurt and Kurt, 2024; Polakova and Klimova, 2024). Furthermore, new pedagogical approaches such as immersive simulations, interactive storytelling and context-aware educational experiences powered by AI have demonstrated to enhance students' motivation and deepen their learning engagement (Çelik et al., 2024; He, 2024).

However, the application of AI assisted English language learning also involves some essential difficulties. Privacy and ethics concerns continue to plague the industry and students and teachers are nervous about their personal data being collected and used by AI systems. Regulatory guidance and strong data protection methods are identified as requirements for a responsible and trustworthy implementation of AI technologies (Al-Smadi et al., 2024; Kurt and Kurt, 2024). There are also concerns about the validity and accuracy of the feedback provided by AI possible algorithmic bias, academic integrity issues (plagiarism) as well as whether teachers are prepared to adopt this technology in their practices (Zakarneh et al., 2025; Mohammadkarimi, 2024). If they are to enjoy the AI, it is important that schools focus on clear policies for use, teacher professional development and ongoing evaluation in order to mitigate risk and ensure equitable and ethical practice (Zhang and Umeanowai, 2025; Alqaed, 2024). Through grounding AI innovation in fundamental tenets of language acquisition pedagogy, these technologies can be used by educators to create more effective, inclusive and ethical English learning spaces in future (Zhang and Umeanowai, 2025).

Limitations and recommendations

A number of limitations should be addressed when considering the valuable insights provided by this systematic literature review. First, the corpus of the relatively recent research so far seems to deal with isolated aspects of AI in English language acquisition such as motivation, pronunciation and writing skills. These fragmented results would not adequately reflect a comprehensive picture of AI’s long-lasting or non-contiguous effects on the various learner groups. The existing literature has failed to provide large-sample, multi-year longitudinal studies to analyse the sustained gain of English proficiency especially across different education levels and demographic circles (Wang et al., 2024; Wei, 2023). Furthermore, there is evidence across studies that technological barriers, teacher preparedness and ethical issues present challenges. However, there is limited evidence on the specific ways in which these challenges arise in different educational and socio-economic environments. There have been relatively few in-depth considerations of institutional capacity, cost and infrastructure in low-resourced settings and when they exist, they are often under-investigated and driven by anecdote (Chiu et al., 2023).

Although many studies suggest that AI tools can boost learner motivation and engagement, there is not much direct or long-term evidence to support these claims (Mohamed et al., 2025; Wang et al., 2024). An additional methodological limitation is from the selection criteria of the present SLR because it is limited the search to English language, peer reviewed journal articles in the previous five years, potentially relevant research from conference proceedings, graduate theses and non-Anglophone publications may have been excluded. Third, dependence on self-reported data from learners and educators primarily also possibility of bias arising from use of self-reported measures, highlights the necessity of employing more objective performance-based

measures to rigorously assess the impact of AI integration within taking English language classes (Niyozov et al., 2023; Wei, 2023).

Based on the conclusions and limitations of our review, it offers a few suggestions to future academic research as well as practical operations. Much-needed research in the future should focus on large-scale longitudinal studies examining the sustained and multi-faceted effects of AI tools on English learning such as their effects on growth in proficiency, motivation, and learner autonomy. This is the work that can give us the empirical depth we'll need to evaluate AI's real educational promise and peril. Additionally, qualitative or mixed-methods research could be used to investigate contextual and implementation challenges particularly in low-resources and under-served educational settings. It will be critical to understand how socio-economic, institutional and cultural influences affect AI adoption to ensure inclusion across various learning contexts.

Finally, new research samples must continue to be diversified to learners of various ages, proficiency levels and socio-economic status and increase generalisability of findings. Future research could also use objective tools, including pre- and post-tests as well as learning analytics that tally with self-reported data to provide a more comprehensive assessment of AI's educative effects. Practically speaking on the implementation side of things, creating deep, scalable teacher training and support models will be just as important in helping teachers to responsibly and effectively embed AI technologies in their classrooms. Lastly, further research and policy development efforts should consider the reinforcement of ethical and data protection frameworks to alleviate issues related to privacy, ownership and responsible use of AI, especially for those vulnerable learner populations (Fu and Weng, 2024; Nguyen et al., 2023).

Conclusion

The results of the present systematic literature review emphasise that the integration of AI-based tools in English language acquisition increases learners' engagement and motivation. Through integrating AI to cater for a wide range of psychological needs, reduce language learning anxiety and adaptation to learner preferences, AI directly contribute for more effective and individualised English acquisition. This is very closely aligned with the aim of this study of transforming the process of English language acquisition through AI technology. Moreover, the review concludes that the transformative potential of AI has in English language teaching is supported by recent studies. However, maximising these benefits requires thoughtful and ethical implementation, continued professional development for educators as well as long-term investment in educational technology infrastructure. Therefore, the findings provide a renewed evidence not only of the benefit of AI on English language acquisition but also of the changing challenges and opportunities that may shape the future perspectives of language education in this rapidly growing field.

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Conflict of interest

The authors confirm that there is no conflict of interest involve with any parties in this research study.

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