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The Role of Artificial Intelligence in Enhancing English Language Teaching (ELT): A Review of Tools, Trends, and Pedagogical Impacts

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ABSTRACT

AI is bringing new changes to English Language Teaching by offering approaches based on learners and how they learn best. This review explores how AI is helping to develop ELT by examining how existing and advanced tools and technologies can assist teaching processes and learning outcomes. It also attempts to find out how these tools can help in enhancing personalised learning when adapted to the learners' needs. New technologies such as intelligent tutoring systems, automatic grading tools, and automated agents allow students to learn more personally, instantly, and interactively. In addition to instant feedback, learners benefit from different training paths and can self-test their language skills. There are still some difficulties when AI is applied in ELT. Challenges include algorithmic bias, too much reliance on automated systems, privacy issues, and the risk that not enough will be taught by actual teachers. AI being put into practice ethically and ensuring everyone has access helps support the educator instead of replacing them. Moreover, the article stresses that ongoing research is essential to study the lasting effect of AI on learning language and to support well-informed policy making. The study emphasises that AI can greatly benefit ELT if introduced carefully, responsibly, and with a commitment to inclusion.

Keywords: Artificial Intelligence; Learning Outcomes; Automatic Grading; Algorithmic Bias; NLP; Learning Analytics

1. Introduction

Digital technologies have transformed education, changing how lessons are delivered and the pedagogical practices used. Bringing AI on board is a breakthrough, as it refers to how computers can be built to think like humans[1]. Of many technologies, AI comprises machine learning, natural language processing, neural networks, and intelligent systems[2]. Because English changes so rapidly, it leaves important marks in every field, including ELT.

Because of its worldwide usage, English is important for international conversation, business, politics, research and education. As a result, the need for successful English language teaching has risen very quickly[3]. Due to more connections worldwide and an increased need for everyone to be digitally literate, using AI in ELT is now a key strategy rather than just an addition. Thanks to AI, educators can now provide many students with personalised interpretive ways of learning[4].

ELT uses AI for things like automated programming, speech recognition and talking chatbots. Besides helping students learn a language, the tools also support teachers in managing their classrooms, reviewing student progress and designing more effective curriculums. Moreover, AI-based apps and web platforms allow learners to study anywhere and at any time, opening education to a larger number of people[5].

At the same time AI entered ELT, there has been a larger move towards teaching approaches that support students as active members of their learning. This model includes real-time feedback, personalised lessons, and self-check-ups, allowing students to learn and regulate their learning[6]. Teachers can watch student progress closely and take actions that support effective teaching.

Even so, although AI can be helpful in language learning, there are obstacles to their integration. The following issues should be discussed and managed closely: privacy of data, bias in algorithms, the gap between those with digital tools and those without and how prepared teachers are. It is typically difficult for teachers to use AI tools since they either lack training or their institution's support. In addition, differences in internet and device resources across parts of the world can cause some people to have a hard time accessing the Internet[7].

In addition, the spread of AI makes us ask about teachers' new responsibilities. Because machines are increasingly used to doing easy educational tasks, teachers need to focus more on subjects that machines have not mastered, such as creativity and connection with students. Career growth and regular training prepare teachers to adjust to this development.

Because AI technology evolves and improves very quickly, we need to assess what it means for language education going forward. This review assembles findings and practical notes from research and practice on AI in ELT. It hopes to study existing technology tools, track new trends, and assess their effects on language education and teaching practices.

This review aims to clarify AI's positive and negative aspects in ELT for educators, researchers, and policymakers. It will, therefore, demonstrate why all stakeholders in AI need to behave responsibly, promote inclusion, and cooperate to prevent AI from adding to disruptions in education and ensure it serves educational fairness and betterment instead.

Artificial Intelligence has made a big difference in English Language Teaching, and its results have far-reaching implications for future developments in global education. In the 21st century, working with AI will help expand and improve language learning online.

2. Methodology

The review introduced a systematic and methodical procedure to conduct an inquiry into the incorporation of Artificial Intelligence (AI) in English language teaching (ELT) in terms of tools, pedagogical trends and instructional outcomes. The search, screening and selection of literature followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework to provide rigor and transparency.

To be more thorough, a search was run in a number of scholarly databases: ERIC (Education Resources Information Center), Scopus, Web of Science, Google Scholar, ScienceDirect, IEEE Xplore, SpringerLink, and Taylor & Francis Online. These databases were selected because of their applicability in terms of education, language learning, and technological inquiry. Literature between January 2020 and May 2025 was searched, so recent developments in the use of AI in ELT areas were addressed.

The search methodology included application of keywords, as well as Boolean search operators, in the retrieval of pertinent articles. These keywords were combinations of terms: the combination of Artificial Intelligence and English Language Teaching, AI tools and ELT/EFT and ESL, Natural Language Processing and language education, and Chatbots or machine learning and language learning. These search terms were used on all databases to obtain the most significant research as possible.

The following inclusion criteria were applied to this review: only articles published in English, at least in peer-reviewed journals, book chapters or in high-quality conference proceedings could be considered, as well as having to discuss the use of AI tools or technologies in the specific context of English language teaching (including ESL/EFL or general ELT). Besides, the articles had to give a discussion on pedagogical implications, instructional strategies or learning outcomes affected by AI. All new research materials published in 2020–2025 were not taken into consideration so that all new trends and tools could be included.

Exclusion criteria were used to remove studies that did not directly relate to the research focus. The articles were discarded when they were not concerned directly with English language teaching, had no focus on AI, or were not available in English or beyond the realm of academically reviewed sources (e.g., blogs, editorials, and grey literature). Not only that, the studies that did not relate language testing or assessment to any aspects of pedagogy or instructional approaches were also abandoned.

The screening was done in phases. First, two independent researchers examined all identified articles by reading their titles and abstracts and eliminated the duplicates. The articles which passed this stage were then read in full-text to determine their relevance, methodological quality and agreement with the inclusion criteria. The type of AI tool used, the ELT context, research design, findings, and pedagogical implications are some of the key data to be extracted in an organized data extraction form.

Lastly, in order to ascertain the quality and reliability of the chosen studies a quality appraisal was undertaken. Adequate instruments were applied to evaluate studies like Critical Appraisal Skills Programme (CASP) qualitative research or Mixed Methods Appraisal Tool (MMAT) to assess studies utilizing more than one type of research method. In-

consistencies at any stage of the screening process or data extracting would be discussed and resolved or consulted with a third reviewer to achieve consistency and objectivity in review.

2.1. AI Tools in ELT

Artificial Intelligence's use in ELT has resulted in useful new tools that significantly improve how teachers teach and students learn. With these tools, learners can work on grammar, writing, speaking, and listening[8]. In this part, we discuss four major types of AI tools being used in ELT today: Intelligent Tutoring Systems (ITS), Natural Language Processing (NLP), Speech Recognition and Pronunciation Feedback, and Automated Writing Evaluation (AWE).

2.2. Intelligent Tutoring Systems (ITS)

Using Artificial Intelligence, Intelligent Tutoring Systems show strong results in both education and ELT. They are intended to help students by providing personal support and feedback suited to their level, learning rate and achievements. Unlike the usual, generic ways of learning languages, ITS make it easier for students to stay interested, remember lessons and achieve good results[9].

Some ITS tools widely seen in ELT include Duolingo, Rosetta Stone, Babbel, Busuu and Lingvist. Using AI-powered algorithms, these platforms review how learners respond, make errors, handle challenges and how often they use the platform[10]. With the analysis of such data, the system changes the challenge of the questions, provides additional activities as needed and decides the best interval for repetition, for example, using spaced repetition[11]. When a learner often struggles with forming comparative adjectives, the system responds by including more tasks on the subject, introducing images or offering hints until the learner is successful.

This method uses data tailored to each student, encouraging practice and maintaining the usefulness of what students are taught. Unlike materials that stay the same, ITS keeps changing as the learner does, making offering feedback and further support easy. When learners get instant feedback after answering, they can repeat proper use and improve quickly, preventing simple errors from staying with them[12]. With grammar, vocabulary and sentence structure,

having the feedback right away is very helpful because much practice is needed.

In addition to academic assistance, ITS plays a role in strengthening learner autonomy, which is most important in distance or hybrid education. Students can study when they want, decide which areas to cover in different languages and return to challenging issues as they need to. Gamification features appear on these platforms, such as levels, progress bars, badges, streaks, and leaderboards, making education more active and engaging[13]. They draw on what drives people to learn, which helps keep students practising and dedicated for the long run. Game design appeals to students and adults with different preferences for how they like to learn.

ITS helps enhance how teachers provide different educational experiences for students. One of the most significant problems teachers find is covering a variety of skill levels in the same class setting[7]. ITS addresses this challenge because students can use customised resources without frequent teacher assistance. Because they have more time, teachers can include activities that benefit their students, such as talking, completing projects or discussing different cultures[14].

In addition, ITS collects and analyses performance data that help teachers understand how each student and group is progressing. Analytics can show the grade of correct answers, the period needed for tasks, the mistakes most often made, and students' degree of confidence in their responses[15]. With knowledge of these characteristics, educators can decide on lesson content, how to support students in the classroom, and what to include in their curriculum. This approach helps identify students' learning challenges early, which allows those students to get help quickly[16].

In spite of its many positive aspects, ITS does have some issues. While it succeeds in teaching grammar and vocabulary, it might miss key aspects such as creative writing, basic communication skills, or cultural knowledge. Overusing ITS could result in students feeling distant from each other and teachers, so more attention to working together and talking is important[17].

Even so, advances in AI are bound to cause ITS to handle more than just language and emotions and use conversational agents to replicate how humans exchange information. Doing so will bring closer together what learners require and how they should be taught language. A summary of the importance of ITS in ELT in shown in **Table 1** below.

Table 1. Summary of Intelligent Tutoring Systems (ITS) in ELT.

Aspect	Details
Purpose of ITS	To offer personalized learning experiences with adaptive feedback, pacing, and content suited to learner needs.
Key Tools/Platforms	Duolingo, Rosetta Stone, Babbel, Busuu, Lingvist
Core Features	- Adaptive question difficulty - Spaced repetition - Instant feedback - Data-driven customization
Learner Benefits	- Improved engagement - Increased retention - Learner autonomy - Gamified learning (badges, levels, etc.)
Teacher Benefits	- Handles mixed skill levels - Frees time for creative tasks (e.g., projects, discussions) - Provides analytics
Data Collected	- Accuracy rates - Time-on-task - Common mistakes - Confidence levels
Educational Insights	- Helps in early identification of struggling students and curriculum adjustment

Table 1. *Cont.*

Aspect	Details
Limitations	- Limited creativity and communicative practice - Possible learner isolation without collaborative components
Future Potential	- Integration of emotional and conversational AI - Enhanced human-like interaction and context understanding

2.3. Natural Language Processing (NLP)

NLP is an essential technology in artificial intelligence that lets machines understand, interpret, make and alter human language. NLP makes a big difference in ELT by enabling learners to read, write and understand English with more certainty and understanding[18]. Thanks to NLP in digital learning tools, learners of all abilities can get quick and personal help at any time. People have started using several leading NLP-based applications to help with ELT. For example, Grammarly inspects your writing for errors, provides suggestions for a better style, detects the tone used, and recommends improving grammar and clarity. Rewordify allows learners to read complex texts more easily. Ginger Software makes it easy for learners to understand and work with English text by providing sentence rephrasing, grammar checking, and translation support[19].

These tools are most useful because they give us helpful contextual feedback. With NLP, these tools can tell when a verb does not match its subject, when an adverb is mistakenly used as an adjective, or when the tone is inconsistent. This technique dramatically improves learners' language accuracy, underpinning how well they use any language. Additionally, with Grammarly, learners usually receive explanations for all the corrections, giving them a clearer idea of why language works the way it does[20]. Knowing this is important for building language skills over a long period.

NLP supports semantic analysis, which helps examine important aspects of writing, such as coherence, cohesion, and organisation. Using these tools, students improve their writing skills deep beneath the surface. This is especially important for individuals working on writing in schools or businesses since being clear and well-organised matters[21].

In addition to using NLP to customise learning for each student, these tools assist in differentiating classroom teaching. Students with different levels of language ability receive immediate and customised opinions on their work. This allows new students to get started smoothly and supports detailed feedback for those learning advanced language skills[22]. For teachers, NLP tools help with fast formative assessment, letting them quickly see what students need and manage their lessons more smoothly.

Today, learning management systems (LMS) and writing platforms are adopting NLP so teachers can use it naturally in online classrooms. This information helps teachers follow their students' progress, plan suitable support strategies, and offer useful guidance during lessons[23]. With NLP technology upgrading, using intelligent tools for writing learning becomes increasingly noticeable.

Yet, NLP tools do have restrictions. For example, they can overlook certain language habits while hearing teasing or language meant for different cultures. Reliance on automated feedback might keep learners from doing peer or teacher-guided revisions more often. So, NLP should work alongside human teaching instead of replacing it[24].

Overall, ELT has gained new value by incorporating NLP to help students instantly, appropriately and uniquely with their writing and reading tasks. With its emphasis on accuracy, understanding language and adjusted learning, NLP both tutors and helps guide students in learning a new language. Full summary of the benefits of NLP to ELT is provided in **Table 2** below.

Table 2. Summary of Natural Language Processing (NLP) in ELT.

Aspect	Details
Purpose of NLP in ELT	- To enable machines to understand, interpret, and assist with human language for improved reading, writing, and comprehension skills.
Key Tools/Applications	- Grammarly, Rewordify, Ginger Software

Table 2. *Cont.*

Aspect	Details
Core Features	- Grammar and style suggestions - Tone and clarity detection - Sentence rephrasing - Translation and simplification of complex texts
Learner Benefits	- Immediate feedback - Personalized correction explanations - Better understanding of grammar and style - Improved writing structure
Writing Improvements	- Enhanced coherence, cohesion, and organisation - Better clarity in academic and business writing
Classroom Application	- Tailored learning for various proficiency levels - Fast formative assessments - Supports differentiated instruction
Teacher Benefits	- Helps track student progress - Provides data for feedback and lesson planning - Integrated with LMS and writing platforms
Limitations	- May miss cultural nuances, figurative language or humour - Risk of overdependence on automated feedback - Should supplement human teaching
Future Potential	- Increased integration with LMS - More intelligent and responsive writing aids

2.4. Speech Recognition and Pronunciation Feedback

Even though pronunciation and speaking fluently are essential, they are less often given their importance in learning a language. Traditional teachers often find it difficult to spend much individual time on speaking practice with students[25]. Artificial Intelligence via speech recognition and feedback equipment gives students personalised help as they speak. They rely on deep learning and acoustic modelling to recognise and analyse things people say. Many learners choose Google Speech-to-Text, ELSA Speak, Say It and SpeakPal to improve their articulation, intonation and fluency[26]. They check a range of elements in your voice, like pitch, rhythm, stress and accent, to note your mistakes and suggest corrections. For example, ELSA Speak studies each phoneme and helps users by rating them and displaying visual cues to help them speak as the natives do.

These tools allow users to practice in a personalised, less stressful setting. For many people practising English, talking in front of their friends often makes them feel nervous or unsure about what to say. Using a speech recognition tool, students have a place where they are encouraged to practice sentences on their own. As a result, everyone learns to study independently and gain confidence when talking, which helps in day-to-day situations[27].

Besides, pronunciation tools help learners develop knowledge of the sound structures in English, such as the stress on certain words and the intonation a speaker uses. This matters most for learners who are not familiar with English phonetic sounds. Due to the different sounds in Japanese and Arabic, many speakers of these languages usually have problems with certain English sounds[28]. With phoneme-by-phoneme feedback, speech recognition tools help address these particular issues.

Educators can include these tools in their teaching plans to complement what happens in classrooms. Students are asked to use a pronunciation tool and then submit recordings to check their skills further. Analytics dashboards are also included, which record progress and provide data on improvement in certain phonemes or spoken fluency[29].

In addition, because mobile apps can be used anywhere, speech recognition tools are ideal for blended and remote learning. Included in the broad spectrum of ELT tools or

learning management systems, such platforms gain full acceptance in daily routines. Still, some issues must be addressed. Although AI catches most speech errors, it does not always catch small differences in word connections or regional accents[30]. Moreover, speech therapy tools might not work as well for learning to take turns in a conversation or start a talk without preparation. So, including speech recognition in classes is valuable, but it should be handled along with other methods, not used alone.

Overall, using speech recognition and pronunciation tools is a strong way to help students improve their English-speaking abilities. An expert tutor helps students learn by giving targeted feedback and creating an encouraging place to improve their skills. Full summary of speech recognition and pronunciation feedback in ELT is shown in **Table 3** below.

Table 3. Summary of Speech Recognition and Pronunciation Feedback in ELT.

Aspect	Details
Purpose in ELT	- To support pronunciation, fluency, and speaking confidence through AI-powered tools that provide personalised feedback on spoken English.
Key Tools/Applications	- Google Speech-to-Text, ELSA Speak, Say It, SpeakPal
Core Features	- Deep learning & acoustic modelling - Pitch, rhythm, stress, and accent analysis - Phoneme-level feedback - Visual cues for articulation
Learner Benefits	- Private, stress-free speaking practice - Improved articulation and intonation - Confidence building through repeated independent practice
Speaking Improvements	- Better fluency - Enhanced understanding of English phonemes - Correction of language-specific pronunciation challenges (e.g., for Arabic/Japanese)
Classroom Application	- Integration into lesson plans - Use for homework/practice - Submission of audio recordings - Dashboard analytics for teachers
Teacher Benefits	- Monitors student progress - Identifies phoneme-level issues - Supports blended and remote teaching
Limitations	- Struggles with word linking or regional accents - Does not replace real conversational practice - Limited use in spontaneous dialogue scenarios
Future Potential	- More accurate detection of nuanced speech - Broader integration with ELT apps and LMS platforms

2.5. Automated Writing Evaluation (AWE)

Writing challenges people in language learning more than anything, requiring you to know grammar, vocabulary, word order and how to stay organised. Teachers and students find assessing past and revising writing challenging because it takes much time[31]. Automated Writing Evaluation (AWE) systems now help by giving fast, personal advice on writing homework.

Students can use WriteToLearn, ETS Criterion, Slick Write, Grammarly Business, and ProWritingAid to check their writing for grammar, spelling, punctuation, sentence connections, words used, and structure[32]. Natural language processing and machine learning systems allow learners to immediately see and fix their mistakes. One important benefit of AWE is that it encourages students to write and improve

their work by repeating the drafting, receiving feedback, and revising steps. Now, students can get feedback and edit their work as often as possible since it is all online. In time, students pick up the necessary writing skills and start thinking more deeply about their work[33].

In AWE, scoring is mainly based on rubrics, so comments on your work are usually grouped around coherence, content suitability and the structure of your ideas. In this regard, students understand their place in testing which is important for assessments and standardised tests. For instance, Criterion creates general and trait-specific scores that guide students on which points they need to work on[34].

For teachers, using AWE makes fixing simple errors easier, giving them more time to focus on speaking, writing, and critical thinking. Using analytics dashboards, teachers can monitor student errors, how their work progresses over time, and their classes' overall results. With this information, teachers can structure lessons, understand what skills students lack, and guide them appropriately[35].

Also, it is easier to teach students differently with AWE tools. Learners who are newer to the language receive basic grammar help, but advanced learners are given feedback on tone, vocabulary details and academic style. Due to this flexibility, learners at every level get instruction that suits their needs.

Even though they work well, AWE tools are not free from limitations. Sometimes, they may mistake unconventional or creative texts, miss the point behind special rhetoric or suggest feedback that does not go deep[36]. On top of that, students sometimes use AWE tools too much and do not see the value of peer review or teacher feedback. For AWE to be most useful, it should be used with other elements of writing instruction, such as group work, discussing feedback and learning specific writing genres[37]. AWE tools have improved the field of AI in ELT. By offering fast, expert and customised comments, AWE systems support personal growth in writing and more substantial student autonomy.

2.6. Emerging Trends in AI and ELT

2.6.1. Personalisation and Adaptive Learning

A significant advance in AI-supported ELT is the use of systems that can adapt to each person's way of learning. These systems shift the common education model by adapting teaching to how one student learns differently from another. AI systems can change how they deliver content, give learners feedback promptly, and adjust learning paths based on each student's achievements[38]. This helps learners become independent and interested, and it also supports better language learning because what is taught is matched to each learner's profile.

Personalisation means changing vocabulary, grammar, listening activities and reading activities to suit what each person needs, struggles with, works at and enjoys[39]. On the other side, adaptive learning goes one step ahead by responding immediately to how someone performs. Should a learner have difficulty with the past perfect tense or pronouncing certain sounds, the platform will fix that by focusing the following lessons on those issues. Like in tutoring, this offers the responsive help that individuals need, but schools may be unable to provide it in large groups[40].

Several platforms now support this way of working. Duolingo, Lingvist and Century Tech all use advanced systems to keep track of the progress and modify the resources students learn from. As part of these systems, people might use spaced repetition—which fits in periods for review based on how the brain forgets—and interleaved learning—mixing several topics or skills to boost remembering and using them well[41]. Because they rely on cognitive science, such methods have notably improved learners' long-term memory and language proficiency.

Even so, several restrictions and issues associated with adaptive learning need to be examined closely. A big issue is the possibility that algorithms give users too many choices, leading to a "educational bubble". When content is always aligned with what a learner likes, the system could decrease the learner's chance of encountering a wide range of linguistic patterns or cultural backgrounds[42]. Gaining a language means interacting with unexpected elements and everyday talks. If learners receive mainly material at their level, they might struggle to improve their flexibility in communication[43].

Another important issue is making sure learner data is appropriately used. Personalised systems are based on data about people's internet habits, time spent performing tasks, how often errors occur, and more. Even though the AI needs this data for informed choices, it poses complex questions about confidentiality, security and informed consent. Many

learners, especially minors, might not know precisely what information is being taken or how it is applied [44]. Also, because the algorithms are not publicly known, it is hard to check them for bias, fairness or how accurate they are. If not overseen, these decisions could help maintain educational unfairness [45].

Moreover, AI-based tools mostly miss the emotional and psychological elements that play a role in learning. While stress, low motivation or difficult personal situations might result in a student's poor performance, the system may misunderstand and offer more basic tasks and instruction [46]. Consequently, people may get frustrated and lose interest in learning. Human teachers are better equipped to handle these challenges because they have empathy and an in-depth understanding [47].

To conclude, ELT can be significantly improved with these technologies because they make education flexible, tailored to each learner and efficient. They offer extra help alongside regular classroom lessons and help learners who are studying independently or remotely. Yet, designing and building these systems must consider their educational value, ethical impact and the ability of those involved. Teachers and developers should unite so that programs improve the social nature of learning languages instead of taking its place. AI in ELT will be successful when matched by a strong dedication to providing equitable and overall education.

2.6.2. Chatbots and Conversational Agents

Chatbots and conversational agents have been added to ELT, opening up a new possibility for students to develop their spoken skills, expand their vocabulary and improve their grammar [48]. With these tools, learners can have natural-sounding conversations and practice English language skills at any time and place. For example, Replika, ChatGPT and one of Mondly's chatbots allow learners to have conversations that match their preferences and are quickly responsive [49].

One of the biggest reasons users like chatbots is their easy access. Since AI agents are always on, learners can use them at any time and move through lessons as quickly or slowly as they like [50]. This is a big advantage for remote and under-resourced learners as well as those with unusual schedules. For people who find it challenging to join conversations with others in class, chatbots allow them to practice

their language skills in a peaceful setting.

Their design is also flexible and controllable. ChatGPT and similar tools are designed to change their vocabulary and how they create sentences to fit how much the learner understands. They instantly remind you of better ways to express yourself when talking [51]. As such, if a learner writes, "I am going to market", the chatbot may reply with a fixed example, "I am going to the market," and add an explanation that supports noticing and self-correction, two key processes involved in acquiring a second language. In addition, many platforms enable the bot to participate in conversations about travel, jobs or dining in restaurants. Such games give students experience speaking and listening in situations similar to everyday life, not only grammar exercises [52].

At the same time, these technologies have obvious limitations. A significant disadvantage of chatbots is their incomplete grasp of pragmatics, which involves both social and cultural aspects of language use [53]. They can respond correctly in terms of grammar, though they often do not show the right tone, use irony, show respect or answer appropriately to the context. For example, sometimes a chatbot may not know when an expression should be casual or more formal, or it may mix cultural idioms that are not right for all audiences. This may influence learners by giving them the impression that all languages function the same all the time [54].

Actual human discussions show empathy, humour, proper timing, and reactions to emotions—things that AI has not managed to copy well yet. Even if learners can provide scripted answers, they may struggle with more complicated speech, sharing different emotions clearly, or knowing when to speak [55].

Also, the biases found in training datasets cause both teaching and ethical worries. Chatbots harvest information from large portions of the Internet, which may contain biases, stereotypes, or common cultural views [56]. If left unfiltered, this data may accidentally cause the chatbots to promote bias and share only certain versions of English or cultural traditions.

There is always a risk that people will receive false information. Many chatbots, including those that do not effectively control what they post, may share inaccurate or suspicious information [57]. When used like this, language learners—especially those just learning—may pick up or

learn wrong ways to speak or write.

When used in education, AI conversational agents act as valuable tools to complement other forms of learning. Though they improve confidence and practice, they are not as valuable as learning from skilful teachers or working with a range of people your age. Teachers should help learners appreciate their conversations with chatbots and think critically about the different types of language and behaviour[48].

Overall, chatbots and conversational agents provide an effective and widely usable way to support ELT, mainly by encouraging solo study and increasing chances for English practice. Even so, their inclusion must aim to combine a variety of strategies that appreciate human decisions, intercultural understanding, and thoughtful learning[58]. Then, students will have a better chance to learn how language is used for meaningful conversations outside the classroom.

2.6.3. Learning Analytics

Learning analytics is starting to make a big difference in ELT, empowering us to understand and enhance how students learn. Learning analytics generally refers to gathering, studying and interpreting data about learners and their surroundings to enhance education results[59]. AI tools in ELT help teachers study how students behave during learning, such as their reading speed, how long they stay on a lesson, their quiz performance, typical errors, degree of participation with lessons and more[60]. When these data are blended meaningfully, they reveal helpful information about learner progress and the strength of teaching methods.

AI-driven learning analytics gives teachers instant information about how students are doing. For example, an educator could use the dashboard to notice parts of grammar, such as conditionals and passive voice, that students struggle with regularly[61]. This level of detail lets teachers act fast, assist each student individually, and adjust lessons when needed. Using data, teachers understand the less engaging activities, which helps them change how lessons are delivered. Data-based decisions make instruction more accurate and responsive, mainly when learners study online or in a blended environment[62].

Students can use learning analytics to understand themselves better and how they think about their learning. Dashboard views, tracking tools and charts make seeing your students' learning development easy. Being seen teaches people to set goals, think about their learning and control

their studies, three major parts of learning a new language[35]. For instance, when learners notice frequent problems with listening comprehension, they may pay closer attention to it. Learners become more responsible for their learning when they see how much they have improved.

Organisations, too, use learning analytics to assess their teaching strategies and improve resource utilisation. If data from students in multiple cohorts are combined, educators might see which subjects lead to confusion, which materials prove most useful, and when learners stop participating[63]. With this information, organisations can develop and improve their instruction far more effectively.

Even though learning analytics has potential, it comes with some important challenges and limits in ELT. How data should be interpreted is a central issue. A learner may spend 15 minutes doing a grammar activity and fully understand it or use the time to daydream instead. A decline in students' attention during class could also be caused by boredom, tech problems, or issues in their personal lives. If educators lack understanding of the situation, they may wrongly analyse and fix the problem[64].

In addition, the models that examine this information can be biased and not fully understood. If data for the algorithm are similar and the error rate is not studied enough, the outcomes may be skewed and unwanted inequities might be overlooked. Students whose original culture or language is not the same as most may be seen as low performing because they use different dialects or references[65]. Because of this, students may feel singled out or discouraged which may result in less equity for all.

Protecting privacy and considering right and wrong are extremely important. Most learners do not realise how much of their activity is recorded or what happens to their data later[66]. People should be told everything is needed for informed consent, their data should be managed carefully, and new forms of surveillance should not be allowed. Simply following the law is not enough; institutions should act ethically, make the process transparent to students, protect their privacy and choose secure data storage.

One more big flaw is that many measuring tools depend on straightforward data, so they do not always show the full scope of learning a language. We cannot often measure motivation, emotions, cooperation with peers or social interactions, yet they are extremely important for language

growth[67]. As we primarily measure things we can count, there is a chance that other meaningful aspects of language learning are neglected.

Overall, learning analytics offers great prospects for transforming ELT by making teaching more personal and precise and empowering learners to take charge of their progress. Even so, its application needs to consider students' needs, understand media critically, and act responsibly[68]. Both teachers and administrators should know how to use analytics tools and, more importantly, should be able to interpret results in ways that are fair to all and promote good language development[69]. A balanced combination of methods is needed to see the advantages of learning analytics in ELT.

2.6.4. AI in Assessment

AI has a bigger impact on changing English Language Teaching (ELT) assessments. Because of new developments in NLP and machine learning, AI can be used to evaluate speaking, writing, reading and listening skills, both during the learning process and at the end. They help users improve immediately, do the scoring automatically and watch how learners develop in the long run. AI is helping many platforms like ETS Criterion, Cambridge's Write & Improve, and Quillionz analyse students' performance using grammar, vocabulary, coherence, fluency and pronunciation criteria[70].

Using AI in assessment helps assessments save time and support larger student populations. Testing students in larger classrooms or online usually takes too much time and many resources. With AI, teachers do not have to spend time processing or grading many learners' responses since the AI can do it quickly and uniformly. In large open online courses and popular language programs, this technology helps educators manage student groups more effectively[71]. Also, grading with AI can be accurate and fast since problems such as human tiredness, random bias or unequal grading are avoided.

AI is strong in formative assessments because it can supply instant feedback to students and teachers. A written task normally gets comments right away, helping a student see where they are wrong and improving grammar and vocabulary[72]. Thanks to this type of feedback loop, learners can keep track of their own performance, redo assessments as needed, and find parts of their learning that could be improved. The personal feedback they get helps motivate students to set clear and trackable aims.

Still, people are questioning how accurate and reliable AI tests are. Machines do well at detecting simple mistakes in language, yet they tend to be less able to assess things such as argument structure, tone, creativity or how suitable an answer is in context[73]. An example is if an advanced essay relies on irony or looks slightly different to people than to machines, it can be misread. During oral tests, machine assessments have problems with regional accents, shifting between languages or speech troubles, which can mistakenly award or withhold points from fluent people who talk in non-standard ways[74].

Also, there is a danger that students will write for an expected result instead of using more creative language. When students are taught mainly to write correct and varied words and sentences, they might pay more attention to accuracy than to having a worthwhile conversation[75]. In this regard, the growth of thinking and social skills, which are essential for using language outside school, may be restrained.

Making educational access and equity available is also a serious concern. Many learners do not have the devices or online connections needed to try AI assessments. In such situations, inadequate technology could increase current educational differences[76]. Furthermore, AIs developed using limited data may fail to recognise the different aspects of language used worldwide[76]. It is not uncommon for underrepresented language learners to receive lower scores since their way of expressing things varies from what is included in the training set.

Since AI is not undefeated, it should be considered an extra support, not a challenger, for human assessment. AI is not ready to accurately judge creativity, awareness of different cultures, moods, and good conversation skills that teachers have and can use effectively[77]. Ensuring that AI scales and covers as much as possible and that education involves empathy allows for a fair and balanced education assessment procedure.

In short, AI helps modernise and mass-production-like scale language testing in ELT. Being able to give instant, objective and efficient results is what makes digital learning environments valuable. Still, education technology can only be successful if teachers and administrators follow best teaching practices and ethical guidelines and ensure all stu-

dents are included [78, 79]. AI tools help in language learning when they are used judiciously, as they do not replace the meaningful conversations that people have.

2.7. Pedagogical Impacts

2.7.1. Enhanced Engagement

AI has brought many changes to ELT thanks to its role in boosting learner engagement using gamified platforms and content. Classroom methods that use book exercises and classroom instruction can feel repetitive and discouraging for students who grow up with technology [1]. AR tasks in learning programs encourage students to get involved and continue participating. Duolingo, Kahoot! and Quizlet all use points, leaderboards and rewards to motivate students' intrinsic and extrinsic motivation [2].

The process goes beyond entertaining by requiring students to take action, decide what to do, and see the results right away. This type of interaction makes learners use their minds and apply what they understand to many types of situations. They also set different task difficulty levels according to each learner's progress, meaning the tasks stay smooth and enjoyable [50].

AI encourages multimodal learning using speech recognition, sight, interactive communication, and practical situation scenarios. Each tool is designed for students who think and learn in different ways, supporting them with real, varied experiences related to language. Consequently, students are not limited to studying new words or grammar; they get to practice using language in real-life-style lessons [4].

Because we can use e-learning on our smartphones and tablets, individuals can learn whenever it is convenient, not just in regular educational settings. Gaining language proficiency mostly depends on people switching from listening to speaking and using what they have learned daily [5]. Due to AI, ELT tools make learning more interactive, specially designed for each person, and successful for everyone.

2.7.2. Learner Autonomy

Using AI in ELT has helped students manage their learning shifts independently, leading to the acquisition of essential lifelong language abilities. While classroom teachers decide on the speed and topics covered, educational AI platforms provide learning suited to each person's preferences and schedule [6].

Learning with Rosetta Stone, Babbel, or Mondly means users can learn English as they go, review lessons several times and practice the listening, pronunciation or grammar areas that are most important to them. Because of these online tools, students can get started, keep an eye on their progress and look at various resources without relying on a teacher or a set curriculum [50]. As a result, students learn to take charge and are better able to control their learning strategies.

They also make learning more independent by offering instant feedback to help students solve their problems when they occur. As a result, learners can review their achievements, choose better ways to learn, and update their objectives. Vocabulary tracking, analysing pronunciation, and individual quizzes all work together to let learners see where they are making progress in improving themselves [8].

The move helps people keep learning English even after they leave school. AI allows users to learn a language for school, promotions at work, or interests all by themselves. Ultimately, using AI tools for learning lets learners study on their own time and at their own rate. This change supports the trend in teaching of focusing on students and readies learners to be independent with language in multiple real situations [9].

2.7.3. Teacher Roles and Professional Development

Because of AI, teachers are adopting the role of support, guide and planner rather than just passing along new information. Instead of handling everyday tasks like grading and giving feedback, teachers can work on developing core qualities in their students, such as critical thinking, understanding different cultures and excellent communication [10].

Teachers have to gain new skills to deal with this change. Part of being a teacher today is using AI, understanding its strengths and weaknesses, and deciding how to include them in instructional plans. Teachers should study how AI functions, identify what AI can and cannot do and use insights from data to help them plan teaching methods [11]. An AI tool might help teachers spot common language problems among students and change how they teach. Programs for professional development need to adapt by including teaching about AI and highlighting techniques that use AI only to complement, not replace, relationships with students [12]. If educators use AI-based workshops and enrol in online

courses with expert support, they will better understand and apply AI in their classes.

Practically, there is no substitute for the human aspect in teaching. Being able to feel empathy, have intuition and respond right away is something unique to teachers. They act as intermediaries, supporting stressed pupils, guiding students to cooperate and managing each person's drive to improve [13]. As a result, although AI improves teaching and customises it, teachers must know more. Teachers should quickly adapt, think about improving, and take action when facing new tasks. When AI courses are available, teachers can better open doors to more rewarding and equal language learning opportunities for students.

2.7.4. Inclusive Education

AI could make a big difference in ELT by supporting the learning of those with disabilities, learning challenges or other language difficulties. Personalised AI allows many different kinds of students to receive language lessons that meet their learning needs. Visual or auditory-impaired learners get the advantages of text-to-speech, speech-to-text, and screen readers, which allows them to use these platforms more easily [7]. Also, students with dyslexia will find it helpful when AI provides them with simplified content, lets them highlight text and can read it aloud.

AI is also useful for learners with language processing problems since it splits tasks up and gives feedback gently whenever the user needs it. This encourages them to feel more relaxed and helps them do language tasks more smoothly. Having customisable learning environments, these students can move forward when they want and in the way they need [7]. AI may also help multilingual learners or refugees who have not gotten formal language classes by providing multilingual support, pictures, and translations that explain the meaning in context. They allow users to communicate in English and fit in more easily with native speakers [15].

Still, promoting AI access for many requires property planning and ethical monitoring. Developers should ensure that the data used for learning is varied and that all interfaces are easy and accessible to users. Teachers must learn to understand which students require these tools and correctly use them in lessons [16]. ELT educators can support everyone by offering adapted, personal, and accessible learning possibilities. AI is used carefully can remove obstacles and help each student succeed, no matter their challenges.

2.8. Future Directions and Recommendations

2.8.1. Integration of Human-AI Collaboration

A promising English Language Teaching (ELT) path is when AI and humans cooperate closely. Instead of thinking AI might replace teachers, a better approach is to imagine AI as a helping tool for teachers. AI helps with keeping records, analysing lessons, and supplying tailored input. However, only teachers can supply the human touch, awareness of culture, and the ability to respond quickly to questions—all of which are important for a good language course [17]. In actual use, AI software might spot standard grammar or pronunciation problems in students so the teacher can help them during individual classes. Technology-generated data may assist teachers in deciding how to organise and pace classroom activities. Teachers can watch for things like students' gestures, feelings, and how driven they are—all of which AI has not yet fully interpreted [18]. Using a combination of methods adds more richness to how teaching is done. For example, when assessing writing, AI can give feedback on grammar and organisation, but teachers can comment on expression, style, and reasoning. Both strong accuracy and good decision-making are achieved when these aspects are united [19]. Notably, using and learning AI's limitations should be included in teachers' training. Educators must assess what AI shows them and should not unquestioningly trust the answers it gives. As a result, professional development needs to involve skills training and training on ethical matters such as bias, fairness and student privacy. The success of teamwork between humans and AI is based on working together with each person or system, playing to its strengths for students [20]. Well-planned use of AI can ease teachers' routine work, allowing them more time for motivating, understanding and communicating with students from different cultures—all important qualities in any language learning process.

2.8.2. Research on Longitudinal Impact

AI is being used more in ELT, but there isn't much research yet on how AI tools continue to influence language proficiency and learners' outcomes after many months. Although numerous studies examine immediate results from AI-powered learning, we know little about how AI supports language development in the long run [21].

In the future, more studies should examine how using AI tools often affects learners' language, independence, com-

mitment and thinking skills. For instance, research could ask if using AI-powered feedback for several academic terms improves a student's writing ability more than using only old-style teaching methods. In addition, researchers could study if using these tools early can improve someone's speech to sound more like a native's in the long run [22].

Longitudinal research is important to understand if developed AI-based learning can be used elsewhere. Do the skills gained from automated checks on grammar really boost performance in authentic talk and writing? Can students adapt what they learn with AI to situations they encounter outside school, at home, or at work? We should also study how AI influences learners' social and cultural environments. If students use AI over a long period, it could change their view of feedback, those in authority, and how they connect with peers [23]. We must assess whether continual use of AI reduces those qualities that foster independence and good thinking or helps learners become more confident and understand themselves better. Furthermore, longitudinal research should focus on equity. Do these devices narrow or increase the space between students' achievements? What results do learners of different classes and digital literacy levels experience when using AI-supported education?

If researchers want meaningful results, they need to examine different student groups, combine data from surveys with their observations, and ask educators, students, and technology professionals for opinions [24]. A better understanding of AI's future impacts allows us to apply it to ELT in ways that improve teaching and learning for all.

2.8.3. Policy Frameworks

Because AI is becoming more important in ELT, there is now a need for clear and detailed policy regulations. There is a need for everyone involved in education to draft uniform and ethical rules for AI in language learning. The first part of having a firm policy is ensuring that AI systems uphold fairness, are transparent, hold people accountable, and protect privacy. When dealing with students, their data must be protected by laws in countries like the GDPR. There should be clear ways to get consent and make data anonymous, and access should be controlled and checked regularly for compliance.

Secondly, laws need to support openness and equal opportunity. All learners deserve equal access, regardless of whether they have the latest technology. Instead, creating AI

programmes should promote tools that can be accessed from any device, support multiple languages, and meet the needs of a range of learners with disabilities or little or no digital experience. Funding for infrastructure and training should be shared fairly to reduce the digital gap.

Thirdly, policies need to prioritise teaching strategies that fit together well. Tools with AI features need to fit with the primary goals, testing procedures and learning philosophies present in the curriculum. AI should be judged for educational value by results, not solely for being a new trend on the market. Teacher training and support should be given top importance in planning. To use AI successfully, teachers are key, and their views are necessary when working on policies. AI adoption strategies should always include professionals, team support, and collaboration with others.

Similarly, policy frameworks should include built-in features for review and the capacity to change with the situation. Because AI changes, institutions should make policy changes as well. It will support education and values by making sure AI is frequently assessed, receiving input from stakeholders, and repeatedly improving. All things considered, strong policy frameworks are necessary to use AI properly, fairly, and effectively in ELT. They offer important guidance to ensure that educational innovation does not overshadow ethical, accepted, and effective teaching practices.

3. Conclusions

Artificial Intelligence has introduced new methods to ELT by making instruction more personalised, improving tests and test results, and offering compelling and flexible tools. Real-time support, feedback, and analysis from AI help both teachers and learners improve their learning. Edtech supports students by placing learning control in their hands and enabling teachers to act based on useful data.

Nevertheless, bringing AI into ELT requires more than installing new devices; it should be done with consideration, care and a sound educational process. It is important to deal with privacy, algorithmic bias and inequality online to stop making educational differences worse. Teachers must be taught how to interact effectively to ensure AI helps teachers rather than replaces them. Since AI is advancing, we must keep changing our teaching practices and policies. Learners will benefit most from AI if it is designed using empathy,

critical thinking and sensitivity to different cultures. The key is ensuring AI promotes learning for all, is personally significant and continues throughout life instead of merely being used for automation.

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