

Evolution of English Language Teaching in the Digital Age

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Abstract

This chapter presents an overview of diachronic development of English Language Teaching (ELT) and probes critically into the evolutionary role of technology in reframing language teaching methodologies, approaches and diverse learning settings. The chapter gives particular attention to the contexts where English is used as a second language, emphasizing how globalization and rapid technological advancements have considerably determined the methods and practices of language teaching. Using a qualitative approach and reviewing literature, the chapter offers a succinct historical outline of established approaches to ELT, tracing the evolution from teacher-centered methodologies to interactive learner-centered communicative pedagogical practices. Subsequently, the chapter explores the integration of technology in ELT, mainly through Computer-Assisted Language Learning (CALL), the method marked a significant evolution in the trajectory of learner-centered classrooms. Moreover, the discussion accentuates the impact of internet as a multifunctional resource for language teaching and learning, reinforcing the contribution of internet to online learning, distances education, and blended learning milieus. Further, the chapter illustrates the importance of Mobile-Assisted Language Learning (MALL) in enabling differentiated and individualized learning experiences. It also elucidates the driving force of advanced technologies like Artificial Intelligence (AI) and other digital innovations in enriching language acquisition. Prioritizing the participatory and experiential technologies, Virtual Reality (VR), Augmented Reality (AR), and the Metaverse, represent the up-and-coming frontier of fully interactive and engaging language learning. It also critically addresses the challenges and limitations associated with the integration of digital technologies, including issues of accessibility, digital literacy, and infrastructure. The readers able to understand the pedagogical evolution in ELT, assess digital tools in facilitating language learning experiences, analyze AI in contextualized pedagogy, evaluate opportunity and challenges associated with the use of digital tools in English language education. It also helps the reader to realize the shift towards learner autonomy, collaboration, experiential, inclusive, flexible, technology-driven learning ecosystems.

Keywords: *English Language Teaching (ELT); Computer-Assisted Language Learning (CALL); Mobile-Assisted Language Learning (MALL); Artificial Intelligence in Language Learning; Immersive Learning Technologies*

1. Introduction: Contextualizing ELT in the Digital Age

English Language Teaching (ELT) has undergone substantial transformation as a result of globalization, changing patterns of international communication, and rapid technological development. English is no longer confined to the cultural and geographical boundaries of its traditional native-speaking communities; it has become a major language of international communication, higher education, scientific and technological exchange, employment,

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business, travel, and global mobility. Crystal (2003) observes that the global status of English emerged through a complex combination of historical, political, economic, and cultural forces rather than from any inherent linguistic superiority. The worldwide expansion of English has consequently increased the demand for English-language education and altered the purposes for which learners acquire the language. Graddol (2006) similarly identifies a changing global linguistic environment in which English is increasingly used among multilingual speakers for international communication, suggesting that the traditional distinction between English as a foreign language and English as a global communicative resource requires reconsideration. In this context, ELT has had to move beyond an exclusive emphasis on grammatical accuracy and imitation of established native-speaker norms towards communicative competence, intercultural awareness, learner autonomy, and the practical use of English in diverse contexts (Crystal, 2003; Graddol, 2006).

The changing status of English has also generated a need for more innovative approaches to language teaching. Contemporary learners encounter English through multiple social, academic, professional, and digital environments, making a purely teacher-centred and textbook-dependent model increasingly inadequate for all learning contexts. Kachru's (1992) concept of World Englishes is particularly relevant to this development because it recognizes the plurality of Englishes and the diverse sociolinguistic contexts in which English is learned and used. The implication for ELT is that effective language teaching cannot be understood solely in terms of transferring a standardized linguistic system from teacher to learner. Instead, teaching must respond to learners' communicative purposes, cultural contexts, linguistic backgrounds, and changing modes of interaction. Innovation in ELT, therefore, involves not simply introducing new classroom techniques but reconsidering the objectives, materials, roles, and relationships that constitute language education. The British Council similarly notes that contemporary ELT innovation encompasses changes in methodology, content, design, and technology and should address current educational challenges rather than adopt technology merely for its novelty (Chong, 2024).

Technological advancement has accelerated this transformation by expanding the spaces in which English can be taught and learned. Digital platforms, mobile applications, online resources, multimedia materials, learning management systems, virtual classrooms, digital corpora, and artificial-intelligence-based tools have extended language learning beyond the physical boundaries of the conventional classroom. Technology has enabled learners to access authentic English-language materials, communicate with users across geographical boundaries, practise language skills independently, and receive increasingly immediate forms of feedback. The British Council notes that digital platforms, online corpora, mobile learning, and online professional-development networks have already altered both classroom practice and the professional lives of English teachers (Chong, 2016). More recent developments have further expanded these possibilities through AI-supported language practice, personalised learning, interactive simulations, and automated feedback. Such developments indicate that the digital transformation of ELT is not simply a matter of replacing printed textbooks with electronic materials; it involves a broader reconfiguration of how language is accessed, practised, communicated, assessed, and experienced.

The transition from traditional classrooms to digital and immersive learning environments has consequently altered the roles of both teachers and learners. In the conventional classroom, learning is often organized around a fixed location, timetable, textbook, and teacher-mediated interaction. Digital environments, by contrast, can facilitate synchronous and asynchronous learning, self-paced practice, collaborative online tasks, multimedia interaction, and communication beyond institutional boundaries. Learners can increasingly exercise greater autonomy by selecting resources, controlling the pace of practice, and engaging with English outside formal classroom hours. The British Council identifies learner autonomy as an important contemporary trend in ELT, noting that the widespread availability of online resources, applications, and authentic English materials has expanded opportunities for learning beyond the classroom (Chong, 2024). At the same time, digital learning does not automatically guarantee better learning. The effectiveness of technology depends upon appropriate pedagogy, teacher mediation, learner digital literacy, meaningful interaction, and access to reliable technological infrastructure.

A critical examination of digital ELT must therefore recognize both its possibilities and its limitations. Digital technologies can increase flexibility, widen access to learning resources, support differentiated instruction, and create new opportunities for communication and learner autonomy. However, unequal access to devices, connectivity, digital skills, and quality educational resources can reproduce existing inequalities rather than eliminate them. The British Council's research on English and technology highlights this tension, noting that digital learning has the potential to reduce resource gaps while simultaneously creating or reinforcing a digital divide where learners lack adequate hardware, software, or connectivity (British Council, 2022). Consequently, the evolution of ELT in the digital age should not be interpreted as a straightforward movement from an inferior traditional model to a technologically superior one. Rather, it represents an ongoing pedagogical transformation in which teachers and institutions must determine how technology can be used meaningfully, inclusively, and critically to support language development.

Against this background, the present chapter examines the evolution of English Language Teaching in the digital age, tracing the movement from conventional classroom-based approaches towards technology-mediated, blended, online, interactive, and immersive learning environments. It considers how globalization has changed the purposes and status of English, how technological developments have reshaped pedagogical practices, and how digital tools have altered the roles of teachers and learners. At the same time, the chapter critically considers the challenges accompanying digitalization, including unequal access, digital literacy, teacher preparedness, and the need to maintain meaningful human interaction in technology-mediated learning. The purpose is therefore not to equate technological advancement automatically with pedagogical progress, but to examine how digital technologies have transformed the ways English is taught, learned, practised, and experienced, and to identify the emerging possibilities and challenges that shape the future of ELT.

2. Traditional Approaches to English Language Teaching

The evolution of English Language Teaching (ELT) reflects changing understandings of language, learning, and communication. Earlier methods emphasized grammatical knowledge, translation, oral practice, or habit formation, while later approaches increasingly focused on meaningful communication and learner participation. Richards and Rodgers (2014) emphasize that teaching methods differ not only in classroom techniques but also in their assumptions about language, learning, teacher and learner roles, and instructional materials. The movement from Grammar-Translation to the Direct Method, Audio-Lingualism, and Communicative Language Teaching (CLT) therefore represents a broadening of language education from knowledge about language towards the ability to use language meaningfully.

Grammar-Translation Method

The Grammar-Translation Method developed from traditions of teaching classical languages, particularly Latin and Greek, and later became influential in modern foreign-language education. It emphasized grammatical rules, vocabulary memorization, translation between the first and target languages, and the reading and analysis of written texts (Richards & Rodgers, 2014). Language was consequently treated largely as a system of formal structures that could be consciously analysed and mastered. The method was predominantly teacher-centred. Teachers explained grammatical rules, selected texts for translation, and evaluated learners through written exercises and examinations, while students were expected to memorize vocabulary and reproduce grammatical forms (Richards & Rodgers, 2014). Although this approach strengthened grammatical awareness, reading, writing, and textual interpretation, it provided comparatively limited opportunities for spontaneous oral communication. Its limitation, therefore, was not its attention to grammar itself but the tendency to treat grammatical knowledge as the principal measure of language proficiency.

Direct Method

The Direct Method emerged partly as a reaction against the emphasis on translation and formal grammatical explanation. It promoted the use of the target language directly in the classroom, with greater attention to speaking,

listening, pronunciation, and the association of linguistic forms with meaning (Richards & Rodgers, 2014). Teachers used objects, pictures, demonstrations, questions, and conversations instead of relying extensively on translation. Grammar was generally introduced inductively through language use. The method consequently represented an important shift towards oral communication and active classroom participation. However, its successful implementation required teachers with considerable oral proficiency and suitable classroom conditions. Nevertheless, its historical significance lies in establishing actual target-language use as an important component of language learning (Richards & Rodgers, 2014).

Audio-Lingual Method

The Audio-Lingual Method (ALM) developed prominently in the United States during the 1940s and 1950s under the influence of structural linguistics and behaviourist learning theory. Wartime language programmes created a demand for intensive oral training, contributing to the development of approaches centred on listening and speaking (Richards & Rodgers, 2014). ALM emphasized dialogues, repetition, pattern drills, substitution exercises, and the formation of linguistic habits. Learners practised prescribed structures repeatedly, while teachers controlled activities and provided correction (Richards & Rodgers, 2014). Although this approach strengthened pronunciation, listening, and structural accuracy, its emphasis on controlled responses raised questions about whether successful drill performance could adequately prepare learners for unpredictable communication. These questions were reinforced by developments in linguistic theory. Chomsky's *Aspects of the Theory of Syntax* (1965) placed linguistic competence and the generative nature of language at the centre of linguistic inquiry, challenging explanations that reduced language learning to externally observable habits. Chomsky's importance here is therefore theoretical rather than methodological: his work contributed to the broader intellectual challenge to behaviourist accounts of language.

Communicative Language Teaching

Communicative Language Teaching (CLT) marked a significant shift towards meaningful language use. Rather than concentrating primarily on isolated linguistic forms, CLT emphasizes the ability to communicate through activities such as pair and group work, role play, information-gap tasks, discussions, and problem-solving (Richards & Rodgers, 2014). The theoretical foundation of communicative competence is particularly associated with Dell Hymes (1972). While Chomsky distinguished linguistic competence from performance, Hymes argued that language ability must also account for the social and contextual conditions governing appropriate communication. Communicative competence therefore involves knowing not only what is grammatically possible but also what is appropriate, to whom, when, where, and for what purpose (Hymes, 1972). CLT consequently altered teacher and learner roles. Teachers increasingly functioned as facilitators and organizers, while learners participated actively in constructing and negotiating meaning. Fluency, interaction, functional language use, and contextual appropriateness gained importance alongside grammatical accuracy (Richards & Rodgers, 2014). CLT does not eliminate grammar; rather, it places grammatical knowledge within a broader conception of communicative ability.

From Traditional Methods to Contemporary ELT

The development from Grammar-Translation through the Direct Method and Audio-Lingualism to CLT demonstrates a broadening conception of language proficiency: from grammatical and written knowledge, through oral practice and structural accuracy, towards meaningful communication and contextual language use (Richards & Rodgers, 2014). These methods should not be viewed as a simple sequence in which each completely replaces the previous one; elements of grammar instruction, repetition, oral practice, and communicative activity continue to coexist in contemporary ELT. The significance of this historical development for the digital age is that technology did not create learner-centred or communicative pedagogy. Rather, digital technologies have expanded the environments in which these principles can operate. Online platforms, mobile applications, multimedia, virtual environments, and artificial intelligence can extend opportunities for interaction, practice, feedback, collaboration, and learner autonomy

beyond the physical classroom. Understanding this methodological progression therefore provides the foundation for examining how technology has subsequently transformed English Language Teaching.

3. Emergence of Technology in English Language Teaching

The integration of technology into English Language Teaching (ELT) developed gradually alongside advances in computing and changing theories of language learning. Early technologies mainly provided additional practice, while later developments supported communication, multimedia learning, collaboration, feedback, and learner autonomy. Levy (1997) describes Computer-Assisted Language Learning (CALL) as an interdisciplinary field concerned with the use of computers in language teaching and learning. Its development therefore reflects not only technological change but also changing ideas about how languages should be taught and learned. Warschauer (1996) identifies three broad phases of CALL: Behavioristic CALL, Communicative CALL, and Integrative CALL. These phases should not be viewed as strict replacements, since earlier practices continued alongside newer approaches.

Computer-Assisted Language Learning (CALL)

CALL refers to the use of computers and computer-based applications to support language teaching and learning. Levy (1997) emphasizes the evolving and interdisciplinary nature of CALL, while Chapelle (2001) argues that its value should be assessed according to pedagogical usefulness rather than technological novelty. Technology, therefore, does not automatically improve language learning; its effectiveness depends on how it is incorporated into instructional objectives and activities. The earliest major phase, Behavioristic CALL, was associated particularly with the 1960s and 1970s and was influenced by behaviourist learning theory. Computers were primarily used for drill-and-practice activities involving vocabulary, grammar, spelling, and sentence patterns (Warschauer, 1996). Learners received immediate feedback and could repeat exercises independently. Although this provided efficient practice and reinforced accuracy, the approach offered limited opportunities for spontaneous communication and negotiation of meaning. The computer largely functioned as a digital tutor, extending rather than fundamentally changing traditional controlled instruction. Communicative CALL emerged with the increasing influence of communicative approaches to language teaching. Its focus shifted from mechanical practice towards meaningful language use, learner engagement, problem-solving, games, simulations, and exploratory activities (Warschauer, 1996). The computer was increasingly viewed as a tool for using language rather than merely practising predetermined forms. This phase consequently reflected the broader movement in ELT towards communication and learner participation.

Integrative CALL expanded considerably with multimedia computing and the Internet. Learners could combine text, audio, video, graphics, hypertext, and computer-mediated communication within a single learning environment (Warschauer, 1996). Email, discussion forums, online interaction, and videoconferencing created opportunities for collaborative and socially situated language learning. Internet-based CALL also provided access to authentic materials such as newspapers, websites, podcasts, videos, and digital libraries. However, access to digital resources alone does not ensure effective learning; appropriate pedagogical design and teacher guidance remain essential (Chapelle, 2001). CALL made several important contributions to ELT. First, it promoted interactive learning through learner responses, immediate feedback, repetition, and revision. Second, multimedia expanded access to varied forms of linguistic input, including spoken, written, visual, and audiovisual materials. Third, computer-based learning enabled greater individualization, allowing learners to work at their own pace and revisit difficult material (Levy, 1997). Most importantly, CALL gradually changed the relationship between teacher, learner, and technology. The computer moved from functioning mainly as a tutor to becoming a tool for exploration, communication, collaboration, and access to authentic language.

The development of CALL established the foundation for contemporary digital ELT. As computers became connected through the Internet and increasingly converged with mobile devices, online platforms, social media, videoconferencing, and artificial intelligence, language learning extended beyond the traditional classroom and

computer laboratory. The movement from Behavioristic to Communicative and Integrative CALL therefore represents a broader shift towards interactive, multimodal, networked, and learner-centred language learning (Warschauer, 1996; Levy, 1997). At the same time, CALL demonstrates that technology is not inherently transformative; its educational value depends on purposeful pedagogical integration (Chapelle, 2001). This development provides the foundation for the subsequent emergence of Internet-based learning, Mobile-Assisted Language Learning (MALL), and AI-supported ELT.

4. Internet and Web-Based Language Learning

The expansion of the Internet marked a major transition in the development of English Language Teaching (ELT), extending Computer-Assisted Language Learning (CALL) from the individual computer to networked environments. Whereas early CALL often provided structured practice, Internet-based technologies enabled learners to access information, communicate with teachers and peers, collaborate on tasks, and encounter English in more authentic contexts. Online language learning may occur through web-facilitated, hybrid, or fully virtual formats, demonstrating the increasing integration of technology with different modes of language instruction (Blake, 2011).

Learning Management Systems (LMSs) such as Moodle provided teachers with digital environments for organizing course materials, assignments, quizzes, discussions, and feedback. Such platforms can extend language learning beyond scheduled classroom hours by combining reading, listening, writing, speaking activities, multimedia resources, and online interaction. Their significance, however, lies not simply in digitizing existing materials but in creating opportunities for interaction, collaboration, and learner participation. The Internet also transformed communication in ELT through email, discussion forums, chats, collaborative documents, and video-conferencing. Learners can participate in synchronous and asynchronous interaction with teachers and peers across geographical boundaries. Research on networked language learning has highlighted the importance of long-distance collaboration, linguistic interaction, intercultural awareness, and new forms of digital literacy (Kern et al., 2004). These developments strengthened the communicative orientation of ELT by enabling learners to use English as a medium of interaction rather than merely as an object of study. Online communication can involve discussion, presentation, negotiation of meaning, collaborative problem-solving, and peer interaction, thereby extending communicative learning beyond the physical classroom.

One of the most significant contributions of the Internet to ELT is the expansion of access to authentic language materials. Learners can encounter newspapers, websites, podcasts, interviews, videos, digital libraries, blogs, advertisements, and other forms of naturally occurring English. Such resources expose learners to different linguistic varieties, registers, accents, genres, and communicative contexts. However, access to authentic material does not automatically produce effective learning. Naturally occurring language may contain unfamiliar vocabulary, rapid speech, cultural references, and complex discourse. Teachers therefore remain important in selecting, sequencing, contextualizing, and integrating online resources into meaningful learning tasks. Chapelle (2019) emphasizes that the educational value of technology-mediated language learning depends on how technological opportunities are pedagogically designed and integrated into instruction. The Internet consequently broadened the concept of language-learning materials. In digital and blended environments, learning resources can include not only textbooks and worksheets but also online interaction, multimedia content, collaborative tasks, and participation in digital communities.

Internet-based ELT also created new possibilities for global collaboration. Learners can communicate with people from different linguistic and cultural backgrounds, exchange perspectives, and complete collaborative tasks in English. Such activities can connect language development with intercultural awareness and expose learners to diverse communicative practices. Kern et al. (2004) note that networked language learning increasingly involves long-distance collaboration and raises questions concerning linguistic interaction, intercultural learning, and multiliteracies. Thus, Internet-based ELT can move beyond the traditional teacher–student relationship towards learner–learner and learner–

community interaction. English becomes not merely a subject being studied but a language used for communication across cultural and geographical boundaries.

The Internet made distance language learning increasingly accessible by separating learning from the physical classroom. Learners can access materials, communicate with teachers, submit assignments, and participate in instructional activities without being physically present in the same location. Blake (2011) identifies web-facilitated, hybrid, and fully virtual learning as important forms of online language education. At the same time, the growth of blended learning created a model in which face-to-face teaching is deliberately combined with technology-mediated learning. Online materials, recorded lessons, discussion forums, digital assignments, and virtual activities can complement classroom interaction. Neumeier (2005) emphasizes that effective blended learning depends on determining an appropriate combination of modes according to the objectives and conditions of a particular learning environment. The distinction between fully online and blended learning is therefore important. Online learning can operate without regular physical classroom meetings, whereas blended learning integrates face-to-face and digital components. Both models extend learning opportunities beyond conventional classroom boundaries and allow teachers to combine direct interaction with independent and technology-supported activities.

The Internet ultimately transformed ELT by changing not only where language learning takes place but also what learners can do with language. Searching for information, interpreting multimedia, participating in online discussions, collaborating on digital projects, communicating through video, and interacting with international users have become potential components of language learning. This development continues the progression established by CALL. Behavioristic CALL primarily positioned the computer as a tutor; Communicative CALL increasingly used technology to support meaningful language use; and Internet-based learning transformed technology into a networked environment for communication, collaboration, and access to linguistic and cultural resources. Research evidence also suggests that technology-supported language instruction can produce positive learning outcomes, although effectiveness varies according to instructional conditions and research design (Grgurović et al., 2013). Thus, the Internet provided a crucial foundation for contemporary digital ELT. It expanded access to learning, supported online and blended education, increased opportunities for authentic language exposure, and connected learners to wider communities of English users. It also prepared the ground for the next major development: Mobile-Assisted Language Learning (MALL), in which these digital opportunities became increasingly portable, personalized, and available beyond the computer and classroom.

5. Mobile-Assisted Language Learning (MALL)

The development of smartphones and mobile applications represents a further stage in the technological evolution of English Language Teaching (ELT). While Computer-Assisted Language Learning (CALL) connected language learning primarily with computers and Internet-based learning created networked environments, Mobile-Assisted Language Learning (MALL) made language learning increasingly portable. Kukulska-Hulme and Shield (2008) describe MALL as an evolving field in which mobile devices support language learning through content delivery, communication, collaboration, and language practice. Mobility therefore becomes a significant pedagogical feature, allowing learning to extend beyond fixed classrooms and computer laboratories.

Smartphones provide access to dictionaries, translation tools, language-learning applications, podcasts, videos, digital texts, quizzes, and pronunciation activities within a single device. Language-learning applications can support vocabulary development, listening, pronunciation, reading, and writing through repeated practice and interactive activities. More importantly, mobile technology connects formal education with informal exposure to English. Learners can access language resources at home, while travelling, or during short periods of free time. MALL thus changes not simply the device used for learning but also the location, timing, and organization of language-learning activity (Kukulska-Hulme & Shield, 2008).

Mobile learning is particularly compatible with microlearning, in which content is divided into short and focused activities such as vocabulary exercises, pronunciation practice, brief listening tasks, or grammar questions. Such activities allow learners to use small periods of available time for regular practice. However, microlearning should complement rather than replace extended reading, writing, conversation, and critical engagement, which require sustained attention. MALL also supports greater flexibility and learner autonomy. Learners can repeat activities, monitor progress, select materials, and practise according to their proficiency, interests, and available time. This can provide additional opportunities for individualized learning, although personalization does not eliminate the need for teacher guidance. Teachers remain important in setting objectives, evaluating resources, monitoring progress, and integrating mobile activities into broader curricula.

The most distinctive characteristic of MALL is its potential for anytime-anywhere learning. Unlike conventional instruction, which is generally organized around particular locations and schedules, mobile learning allows learners to engage with English across different settings. A learner may practise vocabulary through an application, listen to a podcast, consult a digital dictionary, or communicate with other English users through a mobile platform. This mobility also strengthens the connection between formal and informal learning. Language development can increasingly occur through everyday interaction with digital content and communities rather than exclusively through classroom instruction. Kukulska-Hulme and Shield (2008) highlight independent learning, distance learning, collaboration, and communication as important dimensions of MALL.

The significance of MALL extends beyond accessibility. Mobile devices can enable learners to create, communicate, collaborate, and participate in digitally mediated language practices. Learners can record speech, produce written or audiovisual content, communicate with others, and engage with English in authentic contexts. MALL therefore represents a shift from technology as a classroom resource towards technology as a continuous learning environment. The evolution from CALL to MALL demonstrates the increasing portability, flexibility, and personalization of digital ELT. Smartphones have extended language learning into learners' everyday environments and increased opportunities for independent and communicative practice. This development provides an important foundation for the next stage of digital ELT: Artificial Intelligence (AI), which introduces more adaptive, conversational, and automated forms of language-learning support.

6. Artificial Intelligence and Digital Innovations in English Language Teaching

The emergence of Artificial Intelligence (AI) represents a significant recent stage in the technological transformation of English Language Teaching (ELT). Earlier technologies primarily expanded access to materials and communication, whereas AI can analyse learner input, generate language, respond to questions, provide feedback, simulate conversations, and support personalized learning. A recent systematic review of 101 empirical studies in higher-education ELT/ELL identifies AI applications functioning as teaching assistants, learning companions, and providers of assessment and feedback, while also noting concerns regarding over-reliance, feedback quality, cultural adaptability, equity, and ethics (Wang et al., 2026).

One important application of AI in ELT is the development of AI-based language tutors and chatbots. These systems can answer questions, explain grammatical structures, generate examples, create practice activities, and simulate conversations. Generative AI applications such as ChatGPT can also respond to learner prompts and support activities including vocabulary development, reformulation, role-play, and conversational practice. AI chatbots are particularly significant because they provide learners with additional opportunities to use English beyond scheduled classroom interaction. Learners can practise interviews, everyday conversations, academic discussions, or other communicative situations repeatedly and receive immediate responses. A systematic meta-synthesis of 57 studies on voice-based AI chatbots in English language learning demonstrates the growing research interest in their use for language practice and interaction (Koç & Savaş, 2025). However, AI conversation cannot be equated with human communication. Human interaction involves social relationships, cultural interpretation, emotion, ambiguity, turn-

taking, and unpredictable responses. AI should therefore be regarded as an additional opportunity for practice rather than a complete substitute for interpersonal communication.

AI has also expanded opportunities for speech and pronunciation practice. Speech-recognition technologies can analyse spoken input and provide feedback, while conversational systems can respond to learners' speech. Such tools may be particularly useful for learners with limited opportunities for English-speaking practice. Nevertheless, recognition and feedback can vary according to accent, pronunciation, background noise, and linguistic variety. AI-generated pronunciation feedback should therefore be evaluated critically rather than treated as an unquestionable standard. Another major application is automated feedback for writing, grammar, spelling, vocabulary, and related aspects of language production. Tools such as Grammarly can help learners identify errors and revise their writing. Automated feedback can make revision more immediate and encourage learners to notice recurring linguistic problems. However, automated systems may not adequately understand rhetorical purpose, disciplinary context, style, or communicative intention. Teachers therefore remain necessary to help learners interpret and evaluate automated feedback.

The emergence of generative AI (GenAI) has further transformed the possibilities of digital language learning. Unlike earlier rule-based systems, generative AI can produce new responses to learner prompts and sustain extended interaction. It can assist with brainstorming, drafting, reformulation, vocabulary practice, grammar explanation, role-play, and feedback. A systematic review of GenAI in language classrooms identifies applications including feedback provision, tutoring, interaction facilitation, and learning support, while also highlighting concerns related to content quality, over-reliance, pedagogy, and academic integrity (Lee et al., 2026). Similarly, Zhang et al. (2026), reviewing 40 studies published between 2023 and 2025, identify benefits and limitations of ChatGPT-based writing feedback and emphasize the need for further research into effectiveness, pedagogy, and ethical issues. The educational significance of GenAI therefore depends greatly on how learners use it. If students simply ask AI to produce complete essays or answers, technology may reduce opportunities to develop independent thinking, planning, drafting, and revision skills. When used to generate ideas, provide alternative formulations, identify weaknesses, support revision, or simulate interaction, however, AI can become a tool for active learning. The distinction is therefore between using AI to replace learning processes and using it to support learning processes.

The increasing presence of AI does not eliminate the need for teachers; rather, it changes their responsibilities. Teachers increasingly need to select appropriate technologies, design meaningful tasks, evaluate AI-generated information, guide responsible use, and develop learners' critical digital literacy. AI-generated responses may be inaccurate or culturally inappropriate, and learners may become overly dependent on automated assistance. Issues of privacy, bias, unequal access, academic integrity, and digital literacy also require pedagogical attention (Wang et al., 2026). The teacher's role consequently moves beyond the traditional delivery of linguistic information towards pedagogical design, mediation, evaluation, and ethical guidance. Teachers can use AI to create differentiated activities, generate practice materials, develop conversation scenarios, and provide additional feedback, while still exercising professional judgment over the suitability of such materials.

AI represents a further stage in the historical development of digital ELT. Behavioristic CALL primarily positioned the computer as a drill-based tutor; Internet-based learning transformed technology into a networked environment for communication and access to resources; MALL made learning increasingly mobile and personalized; and AI introduces more adaptive, conversational, and generative forms of interaction. The significance of AI therefore lies not simply in automation but in the possibility of creating increasingly responsive learning environments. Yet technological capability alone does not guarantee educational effectiveness. Current research emphasizes the importance of teacher preparation, pedagogical design, culturally responsive implementation, and critical evaluation of AI-generated output (Wang et al., 2026). AI consequently represents an important development in ELT, but its educational value ultimately depends on its integration with sound pedagogy, learner agency, teacher expertise, and meaningful human communication.

7. Immersive Technologies and the Rise of the Metaverse

The development of Virtual Reality (VR), Augmented Reality (AR), and metaverse-based environments represents a further stage in the digital evolution of English Language Teaching (ELT). Earlier forms of CALL provided computer-based practice, Internet technologies expanded communication and access to information, mobile technologies increased portability, and Artificial Intelligence (AI) introduced increasingly adaptive interaction. Immersive technologies add another dimension by placing learners within digitally constructed or digitally enhanced environments where language can be experienced through interaction, movement, simulation, and social participation. Research reviews indicate potential benefits of VR and AR for language learning, interaction, motivation, and learner engagement, while also emphasizing the importance of appropriate pedagogical design (Huang et al., 2021; Parmaxi, 2023).

Virtual Reality (VR) creates simulated environments in which learners can perform language tasks within contexts resembling everyday, academic, or professional situations. Instead of simply reading about a restaurant, airport, workplace, or city, learners can participate in simulated activities such as ordering food, asking for directions, conducting an interview, or solving a problem collaboratively. Such applications are particularly compatible with communicative and task-based approaches because language is used to accomplish meaningful purposes. Augmented Reality (AR) differs from VR by adding digital information to the learner's physical environment rather than replacing it. Through smartphones, tablets, or AR-enabled devices, learners can encounter vocabulary, images, audio, or other information connected to real-world objects and locations. AR can therefore support contextualized vocabulary learning and situated language practice. A systematic review by Schorr et al. (2024) found that AR has been widely investigated for language learning, particularly vocabulary development, while also noting limitations in its current adoption. Despite their potential, immersive technologies are not inherently superior to conventional instruction. Issues such as cost, technological requirements, motion sickness, cognitive overload, accessibility, and the need for teacher preparation can affect their implementation (Huang et al., 2021; Parmaxi, 2023). Their value therefore depends on the relationship between technological affordances, learning objectives, and pedagogical tasks.

A distinctive feature of many immersive environments is the use of avatars, through which learners participate in virtual spaces and interact with other users. Avatars can facilitate role-play, social interaction, and communicative tasks while providing learners with a degree of psychological and physical distance from conventional classroom performance. Research on Second Life, for example, has examined its potential for task-based English learning, authentic communication, and cross-cultural interaction (Chen, 2016). Immersive environments can consequently support situated and experiential language learning. Learners use English not merely to answer questions but to perform actions, negotiate meaning, solve problems, and communicate within recognizable contexts. This connects language form with communicative purpose and experience. However, virtual interaction does not necessarily reproduce the complexity of face-to-face communication. Technical problems, unequal participation, social anxiety, and difficulties transferring virtual communication skills to physical contexts may limit its effectiveness. Structured tasks, teacher guidance, and reflection are therefore important when immersive environments are used for ELT.

VR, AR, and multi-user virtual environments also offer opportunities for cultural and intercultural learning. Learners can experience simulated museums, airports, universities, workplaces, markets, and other settings while encountering the language and communicative practices associated with them. Multi-user environments can additionally connect learners with people from different linguistic and cultural backgrounds. This is particularly relevant to contemporary ELT because English is used across diverse cultural and linguistic contexts. Immersive learning can therefore expose students to different accents, varieties of English, communicative styles, and cultural perspectives. Its pedagogical value lies not in presenting a single model of English-speaking culture but in creating opportunities for learners to negotiate meaning across linguistic and cultural differences.

The metaverse generally refers to interconnected or persistent digital environments in which users can interact through avatars and engage with digital spaces, objects, and other participants. For language education, its potential significance lies in combining several developments discussed earlier, including multimedia, communication, virtual worlds, AI, avatars, and collaborative learning. Research on metaverse applications in language education suggests potential benefits for learning and positive learner attitudes, but the research base remains relatively limited (Fan & Chiang, 2023). The metaverse should therefore be regarded as an emerging pedagogical environment rather than an established replacement for conventional ELT. Its significance lies in its potential to integrate simulation, social interaction, communication, and immersive experience within connected digital spaces.

Second Life represents an important precursor to contemporary metaverse-based language learning. Its three-dimensional multi-user environment has supported role-play, task-based activities, social interaction, and simulated real-world communication (Chen, 2016). Contemporary platforms such as VRChat similarly illustrate the possibilities of avatar-based social interaction and user-created virtual spaces, although their open and unpredictable nature creates challenges for formal educational use. The emergence of immersive technologies therefore marks a conceptual shift from learning about language towards learning through experiencing and using language in contextualized environments. VR, AR, and metaverse platforms do not replace grammar, reading, writing, or face-to-face instruction; rather, they can complement these forms of learning by providing experiential and situated opportunities for communication. Thus, immersive technologies represent a possible new frontier in digital ELT. Their long-term significance will depend on empirical evidence, accessibility, teacher preparation, ethical considerations, and effective pedagogical design rather than technological novelty alone. The evolution from CALL to Internet-based learning, MALL, AI, and immersive environments demonstrates an expanding conception of technology—from a tool for practice to a medium for communication, personalization, and increasingly experiential language learning.

8. Pedagogical Implications for English Language Teaching

The technological evolution of ELT has transformed not only the tools available to teachers and learners but also the organization of language learning. Digital, mobile, AI-supported, and immersive environments have increased opportunities for learner participation, collaboration, autonomy, experiential learning, and communication. However, technology itself does not guarantee effective learning; its value depends on how it is integrated into sound pedagogical practices. Digital platforms, mobile applications, AI systems, and online resources can give learners greater control over the pace, location, content, and frequency of practice. Learners can revisit difficult material, obtain additional practice, and pursue individual interests. Yet access to choices does not automatically produce learner autonomy. Teachers remain essential in setting objectives, selecting appropriate resources, monitoring progress, and guiding learners in the effective and responsible use of technology. Thus, digital tools can facilitate student-centred learning, but pedagogy determines how effectively this potential is realized.

Digital communication tools, shared documents, videoconferencing, virtual worlds, and collaborative platforms expand opportunities for peer interaction beyond the physical classroom. They can support peer feedback, collaborative writing, group projects, problem-solving, presentations, and intercultural communication. Immersive environments further allow learners to practise language through avatars, simulations, and shared virtual spaces. The integration of multimedia, simulation, VR, and AR also strengthens experiential learning by allowing learners to perform tasks, make decisions, receive feedback, and reflect on their performance. Activities such as virtual interviews, simulated travel or workplace situations, role-play, and problem-solving can connect linguistic forms with communicative purposes. Nevertheless, technological sophistication does not itself ensure learning. Meaningful objectives and well-designed tasks must remain central; immersion should serve pedagogy rather than become an end in itself.

Digital environments enable learners to communicate across geographical and cultural boundaries with classmates, teachers, international peers, online communities, and AI-based systems. Such interaction can expose

learners to different varieties of English and promote awareness of linguistic and cultural diversity. This is particularly significant in contemporary ELT, where English functions as a means of international communication rather than belonging exclusively to a single linguistic or cultural group. Consequently, the teacher's role is shifting from information provider towards that of designer, facilitator, mediator, and evaluator. Teachers increasingly need to select and evaluate digital resources, design meaningful learning tasks, monitor participation, address misinformation, protect learner privacy, and develop students' critical digital literacy. With AI and immersive technologies, teachers must also determine which aspects of learning can appropriately be technology-supported and which require human interaction. The emerging ELT teacher is therefore best understood as a pedagogical mediator, integrating technological possibilities with linguistic, social, cultural, and educational objectives.

9. Challenges and Limitations

Although digital technologies have expanded the possibilities of English Language Teaching, technological innovation should not automatically be equated with educational progress. Digital ELT raises challenges concerning access, infrastructure, teacher preparation, privacy, ethics, learner dependence, and the quality of digital interaction. A critical understanding of digital transformation therefore requires attention not only to what technology enables but also to who can access it and under what conditions. The digital divide remains a major challenge. Learners may have unequal access to smartphones, computers, reliable Internet, electricity, digital subscriptions, and suitable learning spaces. Access alone, however, does not define the divide. Differences in data availability, device quality, digital literacy, technical support, and opportunities for meaningful participation can also create educational inequalities. Digital ELT consequently depends on reliable infrastructure, institutional investment, technical support, and accessible devices. These requirements become more demanding with VR and AR, which may require specialized hardware and compatible software. Institutions must therefore consider maintenance, accessibility, and long-term costs rather than treating technology acquisition as sufficient for successful implementation. Effective digital ELT depends substantially on teacher preparation. Teachers need more than technical skills; they must understand when and why a technology supports particular language-learning objectives and how it can be integrated into curriculum, assessment, interaction, and learner support. AI, VR, and AR create additional demands for pedagogical and digital competence. Recent research on immersive language learning similarly highlights the need for teacher training and support in designing technology-mediated activities. Professional development should therefore address not simply how to use technology, but when to use it, why to use it, how to evaluate it, and when not to use it.

Digital learning environments can collect information about learners' activities, performance, interactions, and, in some cases, voice or other personal data. AI-based systems raise particular concerns because their data practices and decision-making processes may not always be transparent. UNESCO's guidance on generative AI emphasizes data privacy, human-centred implementation, ethical validation, equity, and protection of human agency. Algorithmic systems may also reflect biases present in their training data. This is particularly significant in ELT, where English exists in multiple global varieties. Automated assessment or feedback based on a narrow model of standardized English may inadequately recognize legitimate linguistic variation. Teachers therefore need to treat automated judgments critically rather than assuming that algorithmic feedback is inherently neutral.

Easy access to translation applications, automated writing tools, and generative AI may encourage learners to outsource aspects of linguistic and intellectual work. The central issue is therefore not simply whether technology is used, but whether its use promotes active learning. Digital tools are most pedagogically valuable when they provide scaffolding, feedback, practice, or opportunities for communication without replacing the cognitive and communicative processes through which language proficiency develops. VR and other immersive technologies introduce additional physical, cognitive, and accessibility concerns. Recent research identifies dizziness, fatigue, motion sickness, neck discomfort, and cognitive overload as potential barriers to effective VR-based English learning, alongside concerns about technological accessibility and cost. Immersive activities should therefore be appropriately paced and designed, with alternative forms of participation available for learners who cannot comfortably or

practically use particular devices. Technological intensity should not become a prerequisite for meaningful language learning.

The development from CALL and MALL to AI, VR, AR, and metaverse environments demonstrates that technology provides new affordances, but no technology constitutes a complete method of language teaching. Effective digital ELT requires balance among technological possibilities, pedagogical objectives, teacher expertise, learner needs, social interaction, accessibility, and institutional context. The central question should therefore not be whether the newest technology can be introduced, but whether it improves a particular learning experience. The future of ELT is likely to involve carefully designed combinations of face-to-face interaction, digital resources, mobile learning, AI-supported practice, and immersive activities, selected according to educational purpose rather than technological novelty.

10. Conclusion

The evolution of English Language Teaching in the digital age represents a gradual transformation in the ways language is taught, learned, practised, and experienced. ELT has moved from approaches that placed strong emphasis on grammatical knowledge, translation, repetition, and controlled practice towards increasingly communicative, learner-centred, technology-mediated, and experiential forms of learning. The development of Computer-Assisted Language Learning (CALL) marked an important beginning in this transformation, progressing from behaviouristic drill-and-practice activities towards communicative and integrative uses of computers.

The expansion of the Internet subsequently transformed CALL into broader networked learning environments. Online platforms, digital communication tools, multimedia resources, and global collaboration enabled learners to access English beyond the physical classroom. Mobile-Assisted Language Learning (MALL) extended this development further by making language-learning resources portable and increasingly available anytime and anywhere. Smartphones and language-learning applications consequently strengthened opportunities for flexible, personalized, and self-directed learning.

The emergence of Artificial Intelligence represents another significant development. AI-based tutors, speech-recognition systems, automated feedback tools, chatbots, and generative applications such as ChatGPT can provide new opportunities for interaction, personalized practice, feedback, and language production. At the same time, AI introduces questions concerning accuracy, overdependence, privacy, academic integrity, bias, and teacher preparation. Its educational value therefore depends on responsible pedagogical integration rather than technological novelty alone.

The development of Virtual Reality, Augmented Reality, and metaverse environments extends digital ELT towards increasingly immersive forms of learning. These technologies can allow learners to interact through avatars, participate in simulated real-life situations, collaborate with other users, and encounter language within cultural and spatial contexts. Research indicates considerable potential for immersive language learning, but the evidence base remains developing and implementation continues to face technical, financial, accessibility, and pedagogical challenges.

Consequently, the history of digital ELT should not be understood as a simple sequence in which each new technology replaces the previous one. Grammar instruction, face-to-face communication, textbooks, teacher explanation, online learning, mobile applications, AI, and immersive technologies can coexist within appropriately designed learning environments. The major transformation lies instead in the expansion of pedagogical possibilities: learners can now access language resources more widely, communicate across geographical boundaries, receive individualized support, collaborate digitally, and participate in simulated communicative environments.

The metaverse can therefore be understood as an emerging frontier rather than a predetermined endpoint in the evolution of digital language learning. Its long-term contribution will depend on whether immersive environments

can provide meaningful communicative experiences while remaining accessible, pedagogically sound, ethically responsible, and inclusive. Ultimately, the future of ELT will depend not on technology alone but on the ability of teachers, learners, and institutions to integrate technological innovation with sound language pedagogy, human interaction, critical thinking, and equitable educational practice.

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