

THE USE OF TECHNOLOGY IN ENGLISH LANGUAGE TEACHING AND LEARNING: AN ANALYSIS

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Abstract

The use of technology in English Language Teaching has changed the way we teach and learn. Technology is really important for teaching English. We have tools like computer programs, virtual classrooms, phone apps, and Artificial Intelligence that help people communicate better, be more creative, and actually use what they learn. This paper looks at how technology is used in English Language Teaching, what is good about it, how it is used in real life, and what problems we might have. We looked at what other people have written about this topic by reading studies from 2016 to 2026 that we found on websites like Google Scholar, ERIC, and Scopus. What we found out is that technology helps people work together, be more interested, and learn at their own pace. For this to work, teachers need to learn how to use the technology, and we need to have good computers and internet. The study showed that technology can be really helpful if we use it correctly. It can help with teaching methods, help people learn English better, and help English teachers learn new ways to use technology in real-life situations. English Language Teaching and technology can work well together. Technology, in English Language Teaching, is a thing.

Keywords: Digital Tools, English Language Teaching, Language Acquisition, Language Learning, Technology Integration.

Introduction

In the digital age, the integration of technology into English Language Teaching (ELT) has transformed traditional pedagogical approaches, replacing passive learning environments with dynamic, interactive spaces. As a global lingua franca, English demands innovative methods to cater to diverse learners across geographical and cultural boundaries. Digital tools, ranging from interactive software and mobile applications to virtual reality platforms and AI-driven language assistants, have enhanced accessibility and personalised the learning experience. These tools foster skills such as communication, critical thinking, and cultural awareness (Chapelle, 2001; Warschauer & Meskill, 2010).

Despite these advancements, effectively incorporating technology into English Language Teaching (ELT) remains a

complex endeavour influenced by factors such as teacher training, infrastructural limitations, and pedagogical alignment. This paper provides a comprehensive analysis of technology's role in ELT, drawing on a systematic review of literature from 2016 to 2026 sourced from databases such as Google Scholar, ERIC, and Scopus. By examining the benefits, real-world applications, and challenges of technology integration, the study aims to emphasise how it can optimise language acquisition outcomes, empower educators, and bridge gaps in traditional teaching methodologies.

Methodology

This study examines the use of technology in English language teaching. It also reviews what others have written about this topic. The researchers followed a set of rules called PRISMA to ensure that their work was organized and transparent. These rules help ensure that the study is

easy to understand and transparent. This study focuses on English language teaching and the use of technology in this field.

This study looks at articles from journals, papers from conferences, and other academic work from 2016 to 2026. I got these from academic databases like Google Scholar, the Education Resources Information Center, and Scopus. When I searched for things, I used words like technology integration, English language teaching, digital tools, language acquisition, and e-learning in English language teaching. I used these words to find the sources because I wanted to learn about technology integration, English language teaching, and how digital tools and language acquisition and e-learning in English language teaching are related.

Data collection was done in steps. First, we picked articles based on their titles and summaries being relevant to the research topic. The second step involved applying rules to include or exclude articles. To be included, articles had to: (1) be written in English. (2) Focus on using technology in English language teaching. and (3) they were published within the specified timeframe. We excluded articles that were not about language teaching, lacked a research basis, or were inaccessible. After screening, we selected 45 articles for analysis.

This research project involved creating a form to collect important details from each article selected. These details included the author, publication date, research topic, research method, and findings regarding the use of technology to teach English.

The data were analysed using thematic analysis. The selected articles were read in depth and coded for recurring themes, such as the advantages of using technology in English language teaching (ELT), the practical uses of digital tools, and the difficulties encountered during

implementation. The themes were then summarized to make conclusions consistent with the research objectives.

The research procedure consists of four main phases: (1) Identification of relevant literature by searching databases; (2) Screening and selection of articles based on inclusion and exclusion criteria; (3) Thematic coding and categorization of data; and (4) Synthesis and interpretation of the findings for a coherent analysis of the role of technology in English language teaching.

Finding and Discussion

The Role of Technology in English Language Teaching. A systematic review of 45 articles between 2016 and 2026 shows that technology has made a significant change in the field of English Language Teaching (ELT). The findings show that digital tools are not just additional resources but have become an integral part of the modern pedagogical framework. The thematic categories identified in the literature review are: (1) benefits of technology integration in ELT, (2) practical implications of digital tools for language learning, and (3) issues related to the use of technology in the ELT context.

Benefits of Technology Integration in English Language Teaching. Enhanced Student Engagement and Motivation. The most frequently reported benefit across the reviewed studies is a significant increase in student engagement and motivation when technology is integrated into ELT. Digital tools, such as gamified learning platforms, interactive multimedia content, and mobile applications, have proven more effective than traditional methods at sustaining learner interest. According to Godwin-Jones (2017), mobile-assisted language learning (MALL) applications such as Duolingo and Quizlet offer instant feedback and reward systems that motivate frequent practice outside the classroom.

This aligns with Self-Determination Theory (Deci & Ryan, 1985), which holds that learners are more motivated when they experience autonomy, competence, and relatedness, all of which a technology-mediated learning environment can support. Moreover, research evidence suggests that virtual classrooms and synchronous platforms such as Zoom and Google Meet have facilitated a participatory mode of learning. In contrast to the traditional lecture method of teaching, where students simply listen without contributing, the adoption of technology in education fosters a classroom environment where learners actively participate in discussions, collaborate on group projects, and provide feedback to one another.

Personalized and Self-Paced Learning. One of the most important things that can be identified through the literature review process is that the use of technology allows for customized learning paths to cater to individual differences. The use of AI platforms such as Grammarly and ChatGPT, along with adaptive learning tools, helps in adapting to the learning level of the learner by analyzing the learner's performance of the learner. As indicated by Warschauer and Healey (1998), CALL systems were instrumental in setting the basis for personalized learning, while current systems powered by AI have greatly enhanced this feature. As demonstrated through studies conducted by Godwin-Jones (2019) and Reinders (2020), students who benefited from adaptive systems displayed notable gains in their grammatical accuracy, vocabulary acquisition, and reading comprehension skills as compared to those learning through conventional methods.

Development of Communicative Competence. In all reviewed sources, technology has shown the ability to contribute to the development of communicative competence, which is an

important goal in ELT. For example, video conferencing tools, language exchange apps, and artificial intelligence conversational agents offer students opportunities to engage in authentic communication practice by applying their speaking and listening skills. In particular, telecollaboration activities, during which students communicate with native speakers or advanced speakers remotely, have proven useful in developing pragmatic and intercultural communicative competence (O'Dowd, 2018). Moreover, the implementation of digital storytelling, podcasting, and blogging in the English language teaching curriculum has been shown to enhance both writing and speaking skills at once. This multimodal practice helps students to generate language in an innovative manner that requires critical thinking, developing advanced cognitive skills consistent with 21st-century education standards (Kern, 2015). The results suggest Canale and Swain's (1980) model of communicative competence, which includes four types of competencies: grammatical, sociolinguistic, discourse, and strategic competencies.

Collaborative Learning and Global Connectivity. Technology has broken down geographical boundaries for ELT learners and created opportunities for collaborative learning that go beyond the classroom. Collaborative work through cloud computing is easily facilitated by applications such as Google Docs, Padlet, and Microsoft Teams. Through this technology, learners can engage in collaborative writing and collaborative learning skills, which are necessary in the modern workplace. From the analyzed sources, it is apparent that the collaboration on online assignments improves the accountability of the learner since he or she understands that the work performed will be seen by other people, including teachers. Another significant advantage of online learning lies in the

development of intercultural skills owing to the interaction with various cultures in online international collaborations (Byram, 1997).

Real-World Applications of Technology in ELT. Computer-Assisted Language Learning (CALL) is considered one of the first and most researched uses of technology in English Language Teaching (ELT). As evidenced by the analyzed literature, CALL-based learning environments such as computer programs, Internet tasks, and digital language laboratories are still popular across different educational contexts. Modern CALL systems have become much more complex than their predecessors and now feature Artificial Intelligence (AI), speech recognition, and natural language processing technologies. From studies conducted between 2016 and 2026, the CALL systems have been proven to be effective in developing skills in reading and writing, because the system allows the learner to practice and get corrective feedback immediately. Some of the CALL tools used include the Rosetta Stone and the Cambridge Learning Management System.

Mobile-Assisted Language Learning (MALL). The widespread adoption of mobile phones has led to MALL becoming one of the most convenient and popular technologies employed in ELT. The articles cited above have proven that the MALL programs allow for learning languages incidentally, meaning that the learning process occurs unconsciously as a result of repetitive exposure. Students who frequently employed vocabulary and grammar programs demonstrated higher levels of retention and proficiency than those who had no choice but to rely on traditional classroom-based teaching methods (Stockwell, 2016). This is because MALL provides flexibility to the learner so that they can access English language content anytime and anywhere.

Ubiquitous learning is an example of such an approach and is based on the principles of connectivism theory, where the learning process involves establishing connections among different information nodes across digital networks.

Artificial Intelligence in ELT, The concept of Artificial Intelligence can be considered the most revolutionary use of technology in English Language Teaching (ELT) in the present-day world. From the literature that was reviewed, several AI-based technological tools were observed to function at various levels of language learning processes, such as automated writing assessment, intelligent tutoring, artificial intelligence-assisted content creation, and conversational chatbots. The literature analyzed between 2020 and 2026 indicates an increasing focus on the use of generative AI for educational purposes. Scholars like Warschauer et al. (2023) and Reinders & Hubbard (2022) suggest that the use of AI-assisted devices can complement traditional teaching by offering endless opportunities for practice, immediate feedback, and personalized guidance. But these sources also warn against excessive dependence on AI, the danger of developing poor critical skills, and the likelihood of plagiarism, all of which teachers need to consider.

Virtual and Augmented Reality in ELT, emerging results from the literature review show how the use of virtual reality (VR) and augmented reality (AR) is increasing in ELT, especially in terms of immersive language training programs. The use of VR involves the construction of virtual worlds, where students can gain experience using English within real-life situations with no consequence to their actions. According to studies carried out by Lan (2020) and Lan & Lin (2021), the use of VR in ELT helps boost a person's level of confidence when speaking in real-life situations. The use of AR technologies has also extended into the realm of

creating activities related to reading and developing vocabulary. The reason why these technologies prove effective is that they involve multiple sensory perceptions at once, which, according to the field of cognitive sciences, enhances knowledge retention (Mayer, 2009).

Challenges of Technology Integration in ELT. Teacher Training and Digital Competence. However, despite the numerous advantages offered by technology in ELT, a frequently mentioned issue in the literature reviewed is the lack of adequate preparation on the part of teachers to incorporate technology successfully into their teaching process. Teachers often feel that they lack proper training in the field of technology or that they cannot cope with its fast-paced development (Ertmer & Ottenbreit-Leftwich, 2013). The TPACK (Technological Pedagogical Content Knowledge) model (Mishra & Koehler, 2006) helps gain valuable insights into the competencies necessary for successful technology integration. The theory states that successful technology integration entails the ability to integrate technological knowledge, pedagogical knowledge, and content knowledge together. However, the analysis of the discussed literature reveals that most English language teaching professionals manage to master only one or two of these skills, failing to combine them altogether. Thus, the necessity to implement targeted professional development in the area of TPACK appears to be particularly crucial.

Infrastructure and Digital Divide. The problem of infrastructure can be viewed as an important obstacle to the provision of equal access to technological tools for ELT. The examined literature emphasizes unequal distribution of high-speed Internet connections, up-to-date equipment, and technical assistance at the institutional level. This is referred to as a "digital divide" that might further perpetuate

inequalities in education, since students from disadvantaged areas have no chance to benefit from the use of technology in education as their wealthier peers do (Warschauer, 2003). As highlighted by studies carried out in Southeast Asia and Africa, which form part of the reviewed literature, infrastructural challenges continue to act as the main hindrance to the application of CALL and MALL. Governments and schools need to make strategic investments in digital infrastructure as the first step toward effective use of technology in language teaching. This is because digital skills have become essential in today's world.

Pedagogical Alignment and Overreliance on Technology. One of the challenges highlighted in the literature review is that of technology adoption in the absence of effective pedagogical integration. There have been multiple warnings against the uncritical use of technologies in education. This particular issue was noted by Cuban (2001), who referred to this problem as one of "overselling and underusing" technology in education. Where there is no pedagogical objective and theory behind technology adoption, the latter serves only cosmetic purposes. Moreover, the examined research studies also highlight the possibility of learners developing a habit of becoming overly dependent on technology, especially artificial intelligence-driven applications like grammar correctors and translators. Although these technologies provide support for producing language, dependency on them might hinder the process of attaining proficiency and critical thinking abilities independently. Thus, teachers must incorporate a balanced perspective by taking advantage of the convenience and availability of technology without undermining the importance of cognitive demands and interpersonal interactions within language instruction.

Some of the emerging issues from the literature reviewed involve privacy, security, and ethics associated with technology utilization within ELT contexts. The issue of learner data harvesting by companies, as well as AI writing practices and plagiarism, is an important matter that calls upon institutions to come up with policies and educate learners. Digital citizenship, which involves ethical, safe, and critical digital usage practices, has been noted to be an essential skill within today's ELT (Ribble, 2015).

The results from this systematic review have confirmed the transformative impact of technology on English Language Teaching in terms of its effective and purposeful use. The overwhelming evidence from 45 studies confirms the main hypothesis that the use of digital technologies, including CALL, MALL, AI, and immersive virtual reality, can make a tremendous difference in education.

This research aligns well with previous theories in the field of ELT and technology in education. Sociocultural theory of Vygotsky (1978), focusing on mediation and social interaction in learning, is embodied in learning environments supported by technology and collaboration. Likewise, Krashen's Input Hypothesis (1982), emphasizing the importance of meaningful input in language acquisition, is realized through the abundant multimodal input provided by digital means of communication.

The rise of AI as a teaching aid is the single most noteworthy phenomenon that emerged from the analysis of the literature. The fact that AI can offer customized, dynamic, and scalable learning solutions can resolve many shortcomings associated with traditional methods of teaching English as a second language and bring forth exciting possibilities in terms of

individual development. Nevertheless, the ethical considerations involved in AI applications, such as academic honesty, privacy, and teacher autonomy, must be critically analyzed.

Indeed, issues regarding teachers' professional development, infrastructural support, and pedagogical congruence illustrate that technology does not offer an instant remedy for the multitude of problems related to language education. The impact of technology is determined by its proper implementation, which is consistent with the general opinion within educational technology literature, which holds that technology only facilitates teaching rather than substitutes it (Cuban, 2001; Selwyn, 2011). Thus, in terms of ELT, a humanistic use of technology appears to be the best option, as in this case, the technological component will serve the learner and their needs.

The incorporation of these results within the current ELT literature reveals the need for a revised framework where technology is seen as more than just a tool; rather, it must be viewed as an ecosystem, comprising digital tools, teaching techniques, organizational structures, and interpersonal connections that comprise the modern ELT landscape. Further studies will need to consider the long-term impacts of technology integration and the implications of using artificial intelligence on learner autonomy.

Figure. Technology types employed in English Language Teaching studies have been represented through Figure 1. Mobile-assisted language learning and artificial intelligence-based technologies are found to be the most common technology types used in English language teaching, followed by computer-assisted language learning and virtual / augmented realities.

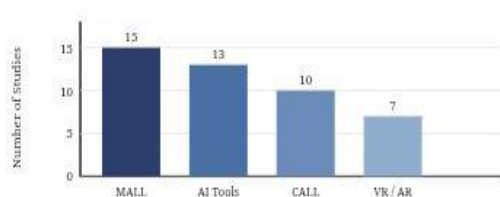


Figure 1. Distribution of Technology Types Used in ELT (2016–2026).

This is clearly shown by the data illustrated in Figure 1, which shows that mobile and AI technology have taken over in terms of conducting research in the area of English language teaching.

Table 1. Summary of Key Findings

Category	Theme	No. of Studies	Percentage (%)
Benefits	Student Engagement & Motivation	38	84.4
	Personalized Learning	32	71.1
	Communicative Competence	30	66.7
Applications	MALL	15	33.3
	AI-Based Tools	13	28.9
	CALL	10	22.2
Challenges	Teacher Training Deficiency	35	77.8
	Infrastructure & Digital Divide	29	64.4
	Pedagogical Misalignment	21	46.7

Represent Table. Table 1 provides a summary of the major advantages, uses, and difficulties in integrating technology from the literature reviewed. According to Table 1, it can be seen that the greatest

advantage reported was that of students being motivated and engaged, whereas the greatest difficulty identified was insufficient teacher training.

The figures presented in Table 1 indicate that while technology offers substantial pedagogical benefits, institutional and human factors continue to mediate the effectiveness of its integration into ELT practice.

Represent Formula. To calculate the percentage of studies addressing each thematic category, the following formula (1) was applied. The result of formula (1) was used to generate the proportional data presented in Table 1 and Figure 1 above.

$$P = (n / N) \times 100$$

And

Where P is the percentage of studies per theme, n is the number of studies addressing a specific theme, and N is the total number of reviewed studies (N = 45).

Conclusions

The purpose of this research paper is to look at the impact of technology in English Language Teaching (ELT). The analysis has been conducted using a systematic literature review of 45 peer-reviewed articles published from 2016 to 2026. It can be observed that technology has positively influenced ELT and made a substantial contribution to improving its quality. The review concludes that the use of technology such as CALL systems, MALL applications, AI-powered tools, and VR/AR environments has resulted in the improvement of learners' engagement, motivation, communication skills, and ability to learn at their own pace. Of all these technological innovations, the use of AI tools and MALL applications was found to be the most commonly used and researched technology in current ELT settings due to the increasing significance of mobile phone availability and machine learning in education.

The real-life applications of technology in English Language Teaching have shown that students who have been taught using the technology-enabled teaching method are more communicatively competent, have better intercultural understanding, and are autonomous learners than those who have been taught conventionally. Moreover, collaborative digital technology has allowed students to surpass geographical boundaries and interact with other English-speaking communities, thus acquiring skills relevant for the 21st-century world.

Nevertheless, the research reveals several issues that need to be overcome to capitalize on the advantages offered by integrating technology into ELT. The lack of teacher training and digital skills becomes the biggest obstacle to using technology efficiently because successful incorporation of technological tools presupposes the simultaneous application of all three types of knowledge (technological, pedagogical, and content knowledge), as discussed by the theory of TPACK. Moreover, infrastructure problems and a digital gap hinder equal access to technology-enabled education in developing countries. Furthermore, potential pedagogical mismatch, dependency of learners on technology, and ethical issues connected with data privacy and AI usage need to be considered.

In conclusion, overall, technology should not be seen as a substitute for good pedagogy or a magic bullet that will solve all the problems associated with language education. Instead, it serves as an amplifier that can enhance the learning process if used properly in conjunction with institutional support and a solid theoretical foundation of language learning. It would be highly beneficial if future efforts to improve English language teaching focused on training digital teachers, extending equal access to technology, and establishing guidelines for the ethical application of artificial intelligence and

technological tools in language education. Future research on the impact of sustained technology use is highly recommended.

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