Modern Approaches to Foreign Language Teaching: Integrating Artificial Intelligence, Digital Technologies, and Communicative Competence in Higher Education

A Critical Review

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Abstract

Background. The integration of artificial intelligence (AI) and digital technologies into higher-education language programmes has accelerated rapidly since the public release of large language models in late 2022, raising fundamental questions about how communicative competence is taught, mediated, and assessed. **Aim.** This article critically reviews contemporary approaches to foreign language teaching, focusing on the convergence of AI, digital technologies, and communicative competence in tertiary settings. **Methods.** Adopting a structured narrative-review design informed by systematic search principles, we synthesised peer-reviewed scholarship—prioritising 2020–2026 publications from Scopus- and Web of Science-indexed journals in applied linguistics and educational technology—and organised the evidence thematically across pedagogical methods, technology-mediated learning, AI applications, immersive and game-based environments, assessment and analytics, teacher and learner factors, and second language acquisition (SLA) theory. **Results.** The review identifies a discernible shift from method-centred to ecology-centred pedagogy, in which AI functions less as a delivery mechanism than as an interactive interlocutor and feedback partner. Evidence suggests benefits for learner autonomy, written-feedback efficiency, vocabulary gains, and access, alongside persistent concerns about over-reliance, equity, assessment validity, data privacy, and the under-theorisation of AI within established SLA frameworks. **Conclusion.** Communicative competence remains the

organising goal of language education; technologies are most effective when subordinated to principled, theory-informed pedagogy rather than adopted for novelty. **Practical significance.** The synthesis offers an integrative agenda for universities, teachers, curriculum developers, policymakers, AI developers, and students, emphasising teacher digital competence, ethical guidelines, and the redesign of assessment for an AI-rich environment.

Keywords

foreign language teaching; communicative competence; artificial intelligence; ChatGPT; computer-assisted language learning; mobile-assisted language learning; higher education; second language acquisition; digital competence; learner autonomy; educational technology; assessment.

1. Introduction

Foreign language proficiency has become a defining competence of internationalised higher education, mediating access to scholarship, mobility, and the global labour market. As universities pursue internationalisation and English-medium instruction expands worldwide, the capacity to communicate effectively across languages and cultures is no longer an elective accomplishment but a core graduate attribute (Macaro et al., 2018). This centrality has intensified scrutiny of how languages are taught, and of whether prevailing pedagogies are adequate to a digital, AI-mediated era.

The history of language teaching is, in part, a history of successive methods—each responding to perceived limitations of its predecessor. The grammar-translation tradition prioritised the analysis of written form; the direct and audio-lingual methods foregrounded oral practice and habit formation; and the communicative turn reframed the goal of instruction as the development of communicative competence (Canale & Swain, 1980; Hymes, 1972; Richards & Rodgers, 2014). Subsequent task-based and content-integrated approaches operationalised communication through meaning-focused activity and disciplinary content (Coyle

et al., 2010; Ellis, 2003). The trajectory is not a simple linear progression but an accumulation of principles, with contemporary practice drawing eclectically on several traditions.

Superimposed upon this methodological evolution is the digital transformation of education. Computer-assisted language learning (CALL) and, later, mobile-assisted language learning (MALL) reconfigured the time, place, and modality of practice, extending learning beyond the classroom and into informal digital spaces (Golonka et al., 2014; Reinders & Benson, 2017; Stockwell, 2022). The COVID-19 pandemic abruptly normalised online and blended delivery, exposing both the affordances and the inequalities of technology-mediated instruction. Most recently, generative AI has introduced conversational systems capable of producing fluent, context-sensitive language and individualised feedback at scale (Kohnke et al., 2023).

These developments pose distinctive challenges in higher education. Large and heterogeneous cohorts, variable entry proficiency, limited contact hours, and competing disciplinary demands complicate the delivery of communicative instruction. Teachers face pressure to integrate technologies for which they may have received little preparation, while institutions grapple with questions of academic integrity, assessment validity, and the equitable distribution of digital resources (Crompton & Burke, 2023; Zawacki-Richter et al., 2019).

Artificial intelligence sharpens these tensions. On one hand, AI tutoring systems, chatbots, and writing assistants promise responsive, personalised practice aligned with long-standing SLA principles of interaction and feedback (Bibauw et al., 2019; Huang et al., 2022). On the other, the same tools raise concerns about learner over-reliance, the erosion of productive struggle, the reliability of generated content, and the displacement of human interaction that communicative pedagogy holds central (Barrot, 2023; Kasneci et al., 2023). Critically, much current enthusiasm is empirical and tool-focused, with limited theoretical articulation of how generative AI relates to established accounts of language development.

This review addresses that gap. Rather than cataloguing tools, it asks how AI and digital technologies can be integrated with—rather than substituted for—the development of communicative competence in higher education. The guiding research questions are: (RQ1) How have foreign language teaching approaches evolved towards, and been reconfigured by, digital and AI-mediated practice? (RQ2) What does current evidence indicate about the effects of AI and digital technologies on communicative competence and related learner outcomes? (RQ3) Which theoretical, pedagogical, and ethical tensions condition their effective integration? The objectives are correspondingly to synthesise the methodological and technological literature, to evaluate evidence critically rather than descriptively, and to derive an integrative agenda for practice and research.

The scientific novelty of the review lies in its integrative framing: where prior syntheses tend to treat methods, technologies, and AI in isolation, this article positions communicative competence as the organising construct against which technological affordances are evaluated, and it foregrounds the under-examined theoretical interface between generative AI and SLA. We advance the proposition that technologies yield their strongest benefits when subordinated to principled, theory-informed pedagogy, and that teacher digital competence and assessment redesign are decisive moderators of success.

2. Method of the Review

This article is a structured narrative review rather than a primary empirical study; consequently, it reports no original participant data. The synthesis followed systematic search principles to enhance transparency and reduce selection bias. Literature was identified through Scopus, Web of Science, and Google Scholar, complemented by hand-searching of leading journals in applied linguistics and educational technology, including TESOL Quarterly, The Modern Language Journal, Language Learning, System, Computer Assisted Language Learning, ReCALL, Language Teaching Research, Computers & Education, Education and

Information Technologies, the British Journal of Educational Technology, and the International Journal of Educational Technology in Higher Education.

Search strings combined pedagogical terms (e.g., "communicative competence", "task-based", "CLIL"), technological terms ("CALL", "MALL", "flipped classroom", "virtual reality", "gamification", "learning analytics"), and AI terms ("artificial intelligence", "ChatGPT", "generative AI", "chatbot", "intelligent tutoring"). Priority was given to peer-reviewed work published between 2020 and 2026, while seminal earlier sources were retained where they remain foundational to theory. Inclusion criteria comprised relevance to tertiary foreign language education, methodological transparency, and indexation in reputable databases; non-peer-reviewed and predatory sources were excluded. Findings were extracted and organised through thematic synthesis, and competing findings were compared analytically. The review's limitations include the predominance of English-language and English-as-a-target-language scholarship and the rapid obsolescence of AI-specific evidence.

3. Literature Review

3.1. The evolution of language teaching methods

The grammar-translation method, dominant through the nineteenth century, treated language as an object of formal study, privileging reading, translation, and explicit grammatical knowledge over oral fluency. Its enduring legacy is visible in examination-driven systems, yet it is widely judged inadequate for communicative goals (Richards & Rodgers, 2014). The direct method and the audio-lingual method reacted against this formalism, the former emphasising immersion and inductive learning, the latter applying behaviourist habit-formation through pattern drills. The audio-lingual method's theoretical foundations were undermined by the cognitive revolution and by evidence that language acquisition is not reducible to stimulus–response conditioning (Lightbown & Spada, 2021).

Communicative language teaching (CLT) reframed the aim of instruction as communicative competence—the ability to use language appropriately in context—drawing on Hymes's (1972) sociolinguistic critique and operationalised by Canale and Swain (1980) into grammatical, sociolinguistic, discourse, and strategic components. CLT's principles—meaning-focused interaction, authentic input, and tolerance of error—remain the dominant paradigm, although their implementation varies markedly across instructional cultures (Littlewood, 2007; Richards, 2006). Task-based language teaching (TBLT) extended CLT by organising instruction around meaningful tasks that elicit authentic language use, though debates persist regarding task definition, sequencing, and the role of explicit form-focused instruction (Ellis, 2009). Content and language integrated learning (CLIL) and project-based learning further situated language within disciplinary or thematic content, promising dual gains in subject knowledge and language, while raising questions about teacher expertise and assessment (Coyle et al., 2010; Pérez-Cañado, 2012). Table 1 summarises these traditions.

Table 1. Principal foreign language teaching approaches and their orientation to communicative competence. Note. Summarised from Canale and Swain (1980), Coyle et al. (2010), Ellis (2003, 2009), and Richards and Rodgers (2014).

Approach	**Primary focus**	**Orientation to communicative competence**
Grammar-Translation	Written form, translation	Minimal; metalinguistic knowledge
Direct / Audio-Lingual	Oral practice, habit formation	Limited; accuracy over interaction
Communicative LT	Meaningful interaction	Central organising goal
Task-Based LT	Authentic tasks	High; competence through doing
CLIL / Project-Based	Content + language	High; situated, disciplinary use

3.2. From CALL to MALL: technology-mediated language learning

Computer-assisted language learning has evolved from behaviourist drill-and-practice software towards communicative and integrative paradigms in which technology mediates authentic interaction (Chapelle & Sauro, 2017; Golonka et al., 2014). The proliferation of mobile devices extended this trajectory into MALL, enabling situated, just-in-time, and informal learning beyond institutional boundaries (Reinders & Benson, 2017; Stockwell, 2022). Meta-analytic evidence is broadly encouraging: integrating mobile devices with instruction yields moderate positive effects on learning outcomes (Sung et al., 2016), and two decades of MALL implementation show measurable, if context-dependent, gains (Burston, 2015).

Yet the evidence base warrants caution. Effect sizes vary with task design, learner characteristics, and the alignment of tools with pedagogical purpose, and many studies are short-term, with limited attention to sustained communicative competence rather than discrete vocabulary or grammar gains. The most consistent finding is that technology amplifies the quality of underlying pedagogy rather than compensating for its absence—a theme that recurs throughout the literature and frames the subsequent discussion of AI.

3.3. Artificial intelligence and generative AI in language education

AI applications in higher education have expanded rapidly, yet systematic reviews note that educators and pedagogy are frequently underrepresented relative to technical concerns (Crompton & Burke, 2023; Zawacki-Richter et al., 2019). Within language education specifically, dialogue-based CALL and chatbots have long promised interactive practice; syntheses indicate potential for engagement and speaking practice, tempered by limited conversational depth in earlier systems (Bibauw et al., 2019; Huang et al., 2022). The release of large language models marked a qualitative shift. Generative tools can produce coherent, contextually adaptive language, generate tasks and outlines, and deliver immediate, individualised feedback (Kohnke et al., 2023).

Empirical and review scholarship has accumulated quickly. In writing, ChatGPT can support idea generation, drafting, and feedback, with reported gains in engagement and certain dimensions of textual quality (Barrot, 2023; Yan, 2023; Zhao, 2022). Reviews of AI chatbots in education report benefits for accessibility and personalised support alongside recurring concerns about accuracy, privacy, and academic integrity (Labadze et al., 2023; Tlili et al., 2023). Critically, however, several studies caution that perceived ease of use may foster complacency and over-reliance, potentially undermining the productive struggle and human interaction that communicative pedagogy holds essential (Barrot, 2023; Kasneci et al., 2023). A further limitation is the under-theorisation of generative AI: much research is tool-centred and short-term, with insufficient articulation of how AI-mediated interaction maps onto established SLA constructs such as interaction, negotiation of meaning, and pushed output (Liu et al., 2024). Table 2 maps salient technologies to representative affordances and risks.

Table 2. Representative digital and AI technologies, affordances, and risks in tertiary language education. Note. Synthesised from the sources reviewed in Sections 3.2–3.5.

Technology	**Representative affordance**	**Principal risk**
MALL	Situated, informal, just-in-time practice	Fragmented, surface-level gains
Generative AI / ChatGPT	Adaptive feedback; conversational practice	Over-reliance; integrity; accuracy
VR / AR	Immersive, contextualised interaction	Cost; access; limited evidence
Gamification	Motivation and engagement	Extrinsic-reward dependence
Learning analytics	Data-informed personalisation	Privacy; surveillance; bias

3.4. Immersive and game-based environments

Virtual and augmented reality offer immersive, experience-oriented contexts in which learners interact with simulated environments and interlocutors, potentially strengthening contextualised language use and reducing speaking anxiety (Lan, 2020). Systematic reviews report promising but still preliminary evidence, constrained by cost, access, and methodological heterogeneity (Parmaxi, 2023). Gamification—the use of game elements in non-game contexts—has been associated with increased motivation and engagement in second language learning, although reviews warn that poorly designed gamification may foster dependence on extrinsic rewards rather than durable learning (Dehghanzadeh et al., 2021). As with MALL, the decisive factor is the integration of immersive or game-based elements within coherent communicative tasks.

3.5. Assessment, analytics, and the digital ecosystem

Digital assessment and learning analytics promise data-informed personalisation and timely feedback. Learning analytics in higher education has matured, yet reviews highlight persistent gaps between analytic capability and pedagogical impact, alongside ethical concerns regarding privacy and surveillance (Viberg et al., 2018). Automated written corrective feedback tools can support revision, though learner engagement with such feedback is uneven and mediated by individual and contextual factors (Koltovskaia, 2020). The advent of generative AI intensifies assessment challenges: tasks that can be completed by AI threaten the validity of conventional written assessment, prompting calls to redesign assessment towards process, interaction, and higher-order competences.

3.6. Teachers, learners, and 21st-century skills

Effective integration depends on teacher digital competence, for which frameworks such as DigCompEdu provide a reference (Redecker, 2017). Yet reviews repeatedly find that teacher preparation lags behind technological change, leaving educators to integrate tools without adequate support (Pokrivčáková, 2019). On the learner side, technologies are associated with enhanced autonomy and out-

of-class engagement, particularly through informal digital learning of English (Godwin-Jones, 2018; Liu et al., 2024; Reinders & Benson, 2017), and with motivational benefits when aligned to learners' goals (Benson, 2011; Dörnyei & Ryan, 2015). These developments connect to the broader agenda of 21st-century and digital skills, which positions language learning within a wider repertoire of communication, collaboration, and critical digital literacies (van Laar et al., 2017).

3.7. Theoretical foundations: SLA and learning theory

The pedagogies and technologies above are intelligible only against SLA and learning theory. Sociocultural theory, derived from Vygotsky (1978) and elaborated by Lantolf and Thorne (2006), frames language development as mediated, social activity—an account well suited to interactional and collaborative technologies, and increasingly invoked to theorise human–AI interaction. The interaction hypothesis (Long, 1996) emphasises negotiation of meaning; the input hypothesis (Krashen, 1985) foregrounds comprehensible input; and the output hypothesis (Swain, 1985) stresses pushed production—each offering criteria against which AI-mediated practice can be evaluated. Cognitive and constructivist perspectives, meanwhile, underscore active knowledge construction and the risks of offloading cognitive effort to AI. A central theoretical question, largely unresolved in the current literature, is whether interaction with a generative model functions pedagogically like interaction with a human interlocutor, or whether it constitutes a qualitatively different form of mediation (Liu et al., 2024).

4. Discussion

Read together, the literature indicates a shift from method-centred to ecology-centred language pedagogy, in which technologies—including AI—are best understood as components of a learning ecology organised around communicative competence rather than as autonomous methods. Three cross-cutting findings emerge. First, the benefits of technology are conditional: meta-analytic and review evidence consistently shows that effects depend on pedagogical design, alignment with learning goals, and sustained integration rather than novelty (Burston, 2015;

Golonka et al., 2014; Sung et al., 2016). This converges with the recurring conclusion that technology amplifies, but does not replace, sound pedagogy.

Second, generative AI introduces a genuine discontinuity in feedback and interaction while simultaneously sharpening longstanding tensions. The capacity for immediate, individualised feedback aligns with interactionist and output-oriented accounts of SLA (Long, 1996; Swain, 1985), and reported gains in writing engagement and feedback efficiency are consistent across several studies (Barrot, 2023; Yan, 2023). Yet the same affordances risk fostering over-reliance and diminishing the productive struggle and authentic human interaction central to communicative competence (Kasneci et al., 2023; Tlili et al., 2023). The evidence is therefore better characterised as conditional benefit under principled use than as unqualified endorsement.

Third, the integration of AI exposes institutional and ethical fault lines—academic integrity, assessment validity, equity of access, data privacy, and teacher preparedness—that technical accounts of AI tend to neglect (Crompton & Burke, 2023; Viberg et al., 2018; Zawacki-Richter et al., 2019). These have pedagogical implications (the redesign of tasks and assessment towards process and interaction), theoretical implications (the need to articulate AI-mediated interaction within SLA), technological implications (the design of tools that scaffold rather than supplant learner effort), and educational-policy implications (the provision of guidelines, infrastructure, and teacher development).

Areas of agreement across studies include the centrality of communicative competence, the conditional nature of technological benefit, and the importance of teacher digital competence. Contradictions and unresolved questions concern the magnitude and durability of AI's effects on communicative competence specifically (as opposed to discrete skills), the theoretical status of human–AI interaction, and the equity consequences of uneven access. These tensions define the agenda below.

5. Practical Recommendations

For universities: embed AI and digital tools within coherent, competence-oriented curricula; invest in infrastructure and equitable access; and establish institutional guidelines on the ethical use of generative AI in language programmes.

For language teachers: adopt technologies in service of communicative tasks rather than for novelty; design activities that use AI to scaffold—rather than replace—learner production; and develop digital competence aligned with frameworks such as DigCompEdu (Redecker, 2017).

For curriculum developers: integrate task-based and content-integrated designs with AI-supported feedback; and redesign assessment towards process, interaction, and higher-order competences resistant to automation.

For educational policymakers: fund teacher professional development; issue clear, evidence-based guidance on academic integrity and data protection; and address the digital divide to prevent the entrenchment of inequality.

For AI developers: design language-learning tools that promote productive struggle, transparency, and pedagogically meaningful feedback, in collaboration with applied linguists and teachers.

For students: use AI tools reflectively as practice and feedback partners while safeguarding the human interaction and effortful production on which communicative competence depends.

6. Future Research Directions

Priorities include: longitudinal studies of AI's effects on communicative competence rather than discrete skills; theoretical work articulating human–AI interaction within SLA; research in under-represented languages and contexts beyond English; rigorous, classroom-based designs with adequate controls; investigations of equity and access; and the development and validation of assessment formats suited to an AI-rich environment. Mixed-methods and design-

based research are particularly well suited to capturing the situated, evolving nature of these phenomena.

7. Conclusion

This review has synthesised contemporary approaches to foreign language teaching at the intersection of AI, digital technologies, and communicative competence in higher education. The principal finding is that communicative competence remains the organising goal of language education, and that technologies—including generative AI—deliver their strongest benefits when subordinated to principled, theory-informed pedagogy. The scientific contribution lies in integrating method, technology, and AI scholarship around communicative competence and in foregrounding the under-theorised interface between generative AI and SLA. The practical contribution is an integrative agenda for universities, teachers, curriculum developers, policymakers, AI developers, and students. The review's limitations include its reliance on English-language scholarship and the rapid obsolescence of AI-specific evidence; these constraints themselves motivate the future research directions identified above. The overarching perspective is one of cautious integration: harnessing the genuine affordances of AI while protecting the human interaction and effortful production at the heart of communicative competence.

Additional information

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