

Emerging Innovations in Technology-Assisted TESOL Practices

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1 Introduction

The acceleration of digital technologies such as mobile applications, social media platforms, and blended learning has transformed the field of TESOL in terms of scope, pace, and pedagogies of teaching and learning (Barrot, 2022; Gaol & Hutagalung, 2020; Shadiev et al., 2020; Teng, 2024). Within this broader digital transformation, the advent of generative artificial intelligence (GenAI) has further introduced unprecedented affordances, opportunities, and challenges for TESOL practices. A growing body of research suggests that emerging technologies, particularly GenAI tools, can support more personalised learning, multimodal engagement, and authentic language use (Cong-Lem et al., 2025; Law, 2024; Lee et al., 2025).

At the same time, the scholarship reflects both optimism and caution. On the one hand, previous studies indicate that mobile- and GenAI-assisted language learning can enhance vocabulary retention (Abdelhalim & Alsehibany, 2025), while AI-driven feedback tools may facilitate iterative writing development (Kim et al., 2025). Social media has likewise been shown to function as an authentic environment for communicative practice (Barrot, 2022). On the other hand, scholars have emphasised the urgent need for methodologically rigorous and contextually grounded research that examines not only whether emerging technologies are adopted, but also how they are pedagogically adapted to local needs and sustained within diverse educational ecosystems (Duman et al., 2015; Shadiev et al., 2020). This concern is particularly salient in Asian contexts, where educational traditions, policy priorities, and sociocultural norms mediate both the uptake and pedagogical impact of technology in distinctive ways (Huang & Teo, 2020; Lai et al., 2022; Le & Bui, 2021). In response to this growing demand for theoretically informed and empirically grounded insights, this special issue examines technology-assisted TESOL from multiple but interconnected perspectives.

A total of twelve papers have been selected after a rigorous peer-review process, collectively showcasing the pedagogical, technological, and contextual diversity of technology-enhanced language education (TELE). Conducted across a range of settings, including Indonesia, Vietnam, Japan, Malaysia, Iran, and Thailand, the studies employ mixed-methods, quasi-experimental designs, systematic review approaches, PLS-SEM modelling, and explanatory sequential analyses. The theoretical lenses adopted span the Technology Acceptance Model, Vygotsky's Sociocultural Theory, Task-Based and Task-Supported Language Teaching, translanguaging, engagement frameworks, and perspectives on identity, motivation, and autonomy/self-regulation.

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These twelve contributions cover a wide spectrum of TELE topics and outcomes, ranging from perceptions of technological affordances and determinants of teacher adoption to interventions targeting vocabulary, speaking, writing, pronunciation, translation, and workplace communication. They also examine psychological constructs such as confidence, identity, anxiety reduction, engagement profiles, and willingness to communicate (WTC), highlighting the complex interplay between technological tools and learners' cognitive, affective, and social development.

2 Perceptions, Acceptance, and Teacher Adoption

The first emerging theme centers on studies examining the perceptions of English language educators and learners regarding technology adoption in language teaching. Using a mixed-methods design, Tin Nghi Tran, Thang Tat Nguyen and Huu Phuc Nguyen explored how AI is perceived in terms of effectiveness, accessibility, and cultural relevance among more than 400 educators and learners across Asian countries. Their findings revealed that participants valued GenAI affordances such as personalized learning paths and real-time feedback, with statistical analysis showing strong links between AI use and perceived gains in fluency, vocabulary, and communication skills. Similarly, Thanh Liem Nguyen and Huong Hoa Le investigated the acceptance of Facebook in English language teaching among 150 secondary school teachers. The results indicated that both perceived usefulness and ease of use played significant roles in shaping teachers' behavioural intentions, although participants also raised concerns about time constraints and potential distractions when using the platform.

Extending this line of inquiry to the school context, Lastika Ary Prihandoko and colleagues modeled Indonesian EFL teachers' post-training adoption of AI. Their PLS-SEM analysis showed how subjective norms, student influence, compatibility, and technologist identities shaped teachers' attitudes and behavioral intentions, underscoring the need for sustained, context-sensitive professional development to support meaningful AI integration.

Beyond issues of perception and adoption, the special issue also highlights how digital technologies shape learning outside formal instructional spaces. Drawing on a multi-case study, Huy Cuong Nguyen examined Vietnamese EFL learners' limited engagement with informal digital learning of English (IDLE) despite widespread availability of technological tools. His findings revealed that unsupportive learning environments, low motivation, and a preference for receptive rather than productive digital practices constrained learners' use of online resources. These patterns underscore the importance of pedagogical scaffolding that helps students connect digital practices with formal learning goals, while also pointing to broader systemic conditions that continue to mediate learners' opportunities to engage with technology in meaningful ways.

3 Speaking, Pronunciation, and Oral Communication

Speaking, pronunciation, and oral communication constitute an important strand within this special issue, with several studies demonstrating how emerging technologies shape learners' productive language development across diverse instructional contexts. Ehsan Namaziandost and Arash Hashemifardnia examined the impact of using three podcast series on teaching vocabulary and speaking skills to 139 Iranian EFL learners. Participants were divided into three experimental groups and one control group; the former learned with podcasts while the latter received traditional instruction. Findings showed significant posttest improvements in vocabulary and speaking skills among all experimental groups compared to the control group. Thi Thanh Hoang, Hien Hoa Nguyen and Virginia O. Gonzales investigated the combined impact of the AI-powered ELSA Speak software and virtual exchange sessions on the pronunciation abilities of 23 Vietnamese EFL learners. Posttest results revealed significant improvements in phoneme production and intonation, though fluency did not improve significantly.

Complementing these classroom interventions, Ervina CM Simatupang and Heri Heryono examined AI-enhanced Task-Based Language Teaching in a 16-week hospitality English program. Their findings revealed notable gains in speaking and writing, with stronger effects observed for speaking than for writing, primarily fostered through AI-supported pronunciation practice and role-play tasks. Interestingly, improvements in WTC-related variables such as confidence and motivation did not correlate strongly with performance outcomes, suggesting linguistic development may stem primarily from structured task exposure.

At a broader level, Chuxuan Xing and Murad Abdu Saeed synthesized 55 empirical studies on AI-supported speaking development. Their systematic review confirmed clear advantages for pronunciation correction and oral proficiency while also highlighting persistent challenges, including accessibility barriers, speech-recognition accuracy issues, and risks of over-reliance on AI-generated input.

4 Writing, Translanguaging, and Machine Translation-Assisted Production

In terms of writing development, Noor Farahhein Johari, Faizahani Ab Rahman and Aliff Nawi contributed a study involving 69 Malaysian ESL students, focusing on implementing Task-Supported Language Teaching in a blended classroom. The experimental group demonstrated significant gains across all writing domains, with particularly large effects in essay content and vocabulary. Similarly, Thi Thanh Ha Nguyen and Thi Hong Nhung Pham examined the use of ICT-support tools, including Learning Management Systems (LMS), Google Docs, and Grammarly, in supporting English-major students' cause-and-effect essay writing. Findings showed a significant improvement in the experimental group's writing skills compared to the control group, attributed to the affordances of digital tools in enabling peer collaboration and providing immediate feedback.

Expanding the discussion to translanguaging and machine translation, Mariko Yuasa and Osamu Takeuchi examined CEFR A2-level learners' multidimensional engagement with machine translation (MT)-assisted writing. Cluster analyses revealed four distinct engagement profiles across behavioural, cognitive, affective, and social dimensions, with learners actively using MT as a translanguaging resource through pre- and post-editing strategies. Despite this engagement, some students expressed uncertainty or guilt regarding MT use, pointing to the importance of explicit strategy instruction and pedagogically grounded translanguaging approaches.

Translation as a more specialised outcome of language education was examined in the study by Atipat Boonmoh and Intrira Kulavichian, where the researchers investigated how GenAI tools combined with social media engagement supported Thai preservice EFL learners in developing translation skills and creativity. Findings highlighted improved accuracy, fluency, and creativity, particularly when online audience feedback complemented GenAI assistance.

5 Conclusion

Across the twelve studies featured in this special issue, a clear message emerges: while generative AI and other digital innovations continue to reshape the landscape of TESOL, their pedagogical value depends fundamentally on how they are contextualised, mediated, and sustained. The contributions collectively move the conversation beyond simple narratives of technological enhancement to illuminate the nuanced ways learners, teachers, and institutions engage with emerging tools, whether through task-based workplace communication, school-level adoption dynamics, translanguaging practices, or AI-assisted speaking and writing development.

These studies underscore that meaningful innovation requires more than the availability of powerful technologies. It calls for intentional pedagogical design, culturally and linguistically responsive implementation, and a commitment to equity that ensures all learners can participate in the evolving

digital ecosystem of language education. As the field continues to navigate rapid technological change, future research must interrogate not only what AI can do, but how, why, and for whom it matters. Doing so will allow TESOL professionals to harness digital tools in ways that honour learner agency, support teacher professionalism, and promote just, sustainable, and context-sensitive language learning environments.

Declaration of Generative AI and AI-Assisted Technologies in the Writing Process

During the preparation of this editorial, ChatGPT-5 was used solely to refine clarity, grammar, and overall readability. All AI-generated suggestions were critically reviewed and edited by the authors to ensure accuracy and appropriateness, and the authors take full responsibility for the final content.

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