

CALL for papers

Special Issue of the CALICO Journal 45(3) October 2028

Ecological Integration of AI and Established Technologies in CALL: Building Sustainable Language Learning and Teaching

Guest editors

- **Qing Ma**, Department of Linguistics and Modern Language Studies, The Education University of Hong Kong
- **Peter Crosthwaite**, School of Languages and Cultures, The University of Queensland
- **Pascual Pérez-Parades**, Department of English Philology, University of Murcia
- **Jiahao Yan**, Department of Linguistics and Modern Language Studies, The Education University of Hong Kong

Description of the Special Issue

The integration of large language models and generative AI into language learning contexts has outpaced the research community's ability to evaluate it critically. In the rush to adopt AI, established CALL technologies, e.g., corpus concordancers, spaced repetition systems, gamified platforms, e-portfolios, etc., and the cognitive processes they were designed to support - noticing, retrieval, consolidation, internalisation, and more - risk being displaced without empirical justification. This leads the field to ask whether AI tools support or circumvent the cognitive processes that underpin durable language acquisition? How do they perform against established CALL tools on measurable learning outcomes? Under what instructional conditions do they complement rather than replace existing approaches? And how does uneven AI access interact with the availability of established, lower-cost CALL tools across diverse learning contexts? As such, CALL is overdue for a critical, collaborative reckoning, one that brings together researchers, teachers, and practitioners to clarify roles, set realistic expectations, and chart a path that leverages AI's strengths without marginalising well-established technologies, approaches, or teachers' pedagogical judgment. This special issue invites the conversation through the lens of ecological design: How can AI productively coexist with established CALL tools and learning routines to create sustainable, equitable learning ecologies for teachers and learners? Such views conceptually treat AI not as an isolated tool, but as part of wider learning ecologies that include human actors, established CALL technologies, pedagogical goals, access, ethics, sustainability, teacher agency, learner autonomy, assessment, and, among others, institutional policies.

Technological advancement is a natural part of societal evolution: as society changes, so too does education, including language education. Yet every technology carries both affordances and limitations. AI can deliver interactive, personalised learning, yet it also produces errors, including hallucinated information, and because its underlying algorithms are rarely

transparent to end users, it often functions as a black box. AI in education is thus a double-edged sword (Mishra et al., 2023), offering considerable promise alongside significant challenges - a tension widely noted in recent literature (e.g., Olga et al., 2023; Wegerif & Casebourne, 2025). Social media offers an instructive precedent: introduced roughly two decades ago, it has profoundly shaped education while simultaneously generating well-documented problems for students' learning, emotions, and well-being (Mishra & Heath, 2024; Stubenvoll et al., 2021). The benefits of new technologies are typically immediate and visible, yet their costs tend to surface more slowly. It is precisely this lag that makes proactive, critical engagement from educators and researchers not just valuable, but necessary.

If social media's rise has been linked to students' emotional challenges, AI presents a different but equally significant risk: eroding the productive struggle that underpins deep learning, alongside broader ethical considerations. This is particularly pronounced in language learning, where AI's most visible benefit - instant access to auto-generated text - can bypass the cognitive work of noticing, hypothesis testing, and practice that acquisition depends on. Recognising both AI's affordances and limitations, a growing body of work has begun pairing AI with corpus technology, an established language tool and conceptual precursor to generative AI, to leverage the strengths of each while offsetting their respective weaknesses (e.g., Liu & Ma, 2025; Cheung & Crosthwaite, 2025). This integrative logic needs not stop at corpus tools - it extends naturally to the full range of mature CALL technologies and learner-centred classroom practices that the field has developed over decades.

To sustain rigorous learning through the cognitive processes that matter, the field needs an ecological approach in which AI coexists with human-centred routines and established CALL technologies. Such ecological designs should deliberately reintroduce appropriate cognitive demands through guided inquiry, corpus exploration, staged feedback, and reflection, so that teachers and researchers can harness AI's strengths while fostering critical thinking and deep learning (Henriksen et al., 2025). Inspired by the Five Spaces framework for educational design (Warr et al., 2020), we conceive of ecological, sustainable language learning environments as those that deliberately cultivate noticing, pattern abstraction, retrieval, feedback-driven production, and transfer. Such language learning ecologies may encompass: (1) artefacts: AI and established tools that enrich input and output; (2) processes: teaching, guided interaction, and assessment for learning; (3) experiences: student engagement, productive struggle, scaffolded reflection, and metacognitive monitoring; (4) systems: institutional structures and policies; and (5) cultures: the beliefs and values that shape how technologies are adopted and used.

Guided by this framework, this special issue invites empirical studies, case studies, meta-analyses, systematic reviews, and position papers addressing one or more of these five spaces. Contributions grounded in complementary frameworks that advance understanding of cognitive processes and ecological design in language learning are equally welcome. Suggested topics may include but are not limited to:

- Risks of AI-only workflows for cognitive engagement and established CALL practice
- Design remedies and ecological alternatives that sustain deep learning alongside AI

- Hybrid workflows that integrate AI with established CALL tools (e.g., corpora, concordancers, LMS-mediated tasks)
- Human–AI collaboration in feedback, materials design, and personalised learning within established CALL frameworks
- Principled integration of AI and established CALL tools through task design that maintains cognitive challenge
- Student learning processes and outcomes: linguistic skills, metalinguistic awareness, and learner engagement in AI and established CALL environments
- Assessment for learning and academic integrity in AI-enhanced CALL: formative approaches and institutional guidance
- Teacher professional development in AI-enhanced CALL: digital literacies, pedagogical judgment, and collaborative inquiry
- Learner and teacher well-being, motivation, autonomy, and identity across AI and established CALL practices

Successful submissions will move beyond “AI vs. old tech” debates to demonstrate how complementary toolsets, practices and pedagogies co-create robust learning ecosystems.

Expressions of interest (deadline: November 30, 2026)

Please submit an expression of interest/proposal of up to 300 words. It should briefly outline: (1) the theoretical framework, (2) the study rationale, (3) research questions, (4) methodology, (5) findings (if available), and (6) implications for future research or pedagogy. For theoretical submissions, clearly state the problem and the proposed solution.

Please note that, according to the CALICO Journal’s policy, at least one author of each article should be a member of CALICO by the time of publication (not for submission).

Please submit your proposal to: calicosi28@gmail.com

Milestone Deadlines

Invitation to authors to submit full manuscripts: **January 15, 2027**

Full manuscripts due to guest editors: **June 1, 2027**

All revisions completed: **March 1, 2028**

Final editorial decisions to authors: **April 1, 2028**

Penultimate version of full issue (incl. editorial intro) submitted for copyediting: **June 1, 2028**

Issue published: **October 15, 2028**

References

Cheung, L., & Crosthwaite, P. (2025). CorpusChat: integrating corpus linguistics and generative AI for academic writing development. *Computer Assisted Language Learning*, 1–27. <https://doi.org/10.1080/09588221.2025.2506480>

Liu, J., Ma, Q. (2025). Supporting low-proficiency L2 learners' vocabulary learning with custom GPT-scaffolded corpus-based language pedagogy: a case study. *Computer Assisted Language Learning*. <https://doi.org/10.1080/09588221.2025.2539152>

Henriksen, D., Woo, L. J., & Mishra, P. (2025). Beyond tools and training: Building sustainable learning environments that evolve with AI. *TechTrends*, 69, 869–875. <https://doi.org/10.1007/s11528-025-01134-5>

Mishra, P., Warr, M. & Islam, R. (2023): TPACK in the age of ChatGPT and Generative AI. *Journal of Digital Learning in Teacher Education*, 39(4), 235-251. <https://10.1080/21532974.2023.2247480>

Mishra, P., & Heath, M. K. (2024). The (Neil) postman always rings twice: 5 questions on AI and education. In M. Searson, L. Langran, & J. Trumble (Eds.), *Generative AI in Teacher Education: Opportunities, Challenges and Visions for the Future*. AACE.

Olga, A., Tzirides, Saini, A., Zapata, G., Sears Smith, D., Cope, B., Kalantzis, M., Castro, V., Kourkoulou, T., Jones, J., da Silva, R. A., Whiting, J., & Kastania, N. P. (2023). *Generative AI: Implications and Applications for Education* (Version 3). arXiv. <https://doi.org/10.48550/ARXIV.2305.07605>

Stubenvoll, M., Heiss, R., & Matthes, J. (2021). Media trust under threat: Antecedents and consequences of misinformation perceptions on social media. *International Journal of Communication Systems*, 15(0), 22.

Warr, M., Mishra, P., & Scragg, B. (2020). Designing theory. *Educational Technology Research and Development*, 68(2), 601–632. <https://doi.org/10.1007/s11423-020-09746-9>

Wegerif, R., & Casebourne, I. (2025). A dialogic theoretical foundation for integrating generative AI into pedagogical design. *British Journal of Educational Technology*, 57(3), 639–654. <https://doi.org/10.1111/bjet.70026>

About the Guest Editors

Qing Ma (<https://orcid.org/0000-0003-3125-3513>) is Professor at the Department of Linguistics and Modern Language Studies and currently serves as Associate Dean (Research & Postgraduate Studies) at Faculty of Humanities, The Education University of Hong Kong. Her main research interests include second language vocabulary acquisition, corpus linguistics, corpus-based literature studies, corpus-based language pedagogy (CBLP), computer assisted language learning (CALL), mobile assisted language learning (MALL), and AI in language education. She has created the Parallel EAP Corpora (<http://corpus.eduhk.hk/eap/>) for research applications and the Corpus-Aided Platform for Language Teachers (CAP) (<http://corpus.eduhk.hk/cap/>) to innovate teaching methodologies. As an experimenter of corpus technology in language education, she is a passionate trainer for English teachers. She has conceptualised and empirically validated a new approach, Corpus-Based Language Pedagogy (CBLP), which has positively influenced numerous pre-

service and in-service teachers. She is currently Co-Editor in Chief of Language Learning & Technology (LLT), and serves as an associate editor for four other journals: *Computer Assisted Language Learning* (CALL), *International Journal of Computer-Assisted Language Learning and Teaching* (IJCALLT), *The Journal of China Association for Computer-Assisted Language Learning* (ChinaCALL), and *Research and Practice in Technology Enhanced Learning* (RPTEL).

Peter Crosthwaite (<https://orcid.org/0000-0002-1482-8381>) is Associate Professor in the School of Languages and Cultures at UQ (since 2017), having formerly been an assistant professor at the Centre for Applied English Studies (CAES), University of Hong Kong (since 2014). His areas of research and supervisory expertise include corpus linguistics and the use of corpora for language learning (known as 'data-driven learning'), as well as English for General and Specific Academic Purposes. He has featured in Stanford's Top 2% Scientists lists for 2023 and 2024. He is currently Co-Editor in Chief of Language Learning & Technology (LLT), EIC of Australian Review of Applied Linguistics (2024-2026), has served as Associate Editor for the Journal of English for Academic Purposes, and sits on the editorial boards of JSLW, IRAL, System, Applied Corpus Linguistics, Research Syntheses in Applied Linguistics, Research Methods in Applied Linguistics, and the book series Studies in Corpus Linguistics.

Pascual Pérez-Paredes (<https://orcid.org/0000-0002-2796-338X>) is Professor of Applied Linguistics and Linguistics at the University of Murcia, and former Lecturer in Research in Second Language Education at the University of Cambridge. His main research interests are the use of corpus linguistics methods in applied linguistics, corpora and digital resources in language education and corpus-assisted discourse analysis. He is Co-Editor in Chief of Cambridge University Press *ReCALL* journal (5.7 IF 2024; ranked 4th in Linguistics and 15th in Education & Educational Research), Assistant Editor of TESOL Quarterly and Co-Editor of the Applied Linguistics Press book series *Corpus Linguistics and Technology-Mediated Language Education in the AI Era*. During 2025/2026, Pascual is a Visiting Professor with the Department of Linguistics and Modern Language Studies at The Education University of Hong Kong (EdUHK).

Jiahao Yan (<https://orcid.org/0000-0002-5256-9915>) is a Post-doc Fellow at the Department of Linguistics and Modern Language Studies, The Education University of Hong Kong. His main research interests include English for Academic Purposes, corpus linguistics, corpus-based language pedagogy, and generative AI in language education. His research appears in *Journal of Computer Assisted Learning*, *Computer-Assisted Language Learning*, *ReCALL*, *Language Learning & Technology*, *System*, and *Journal of English for Academic Purposes*.