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Introduction to the Special Theme issue “Innovative, Interactive, and Intelligent Uses of Technology in Multilingual Classrooms”

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Introduction to the Special Theme issue: "Innovative, Interactive, and Intelligent Uses of Technology in Multilingual Classrooms"

Dear *CATESOL Journal* readers,

As you know, there has been a meteoric rise in interest in innovative, interactive, and intelligent uses of technology over the last decade which has been viewed either as ushering in a transformation of education as we know it or as being a detriment to student learning and growth. Similar to the advent of the internet, proponents and adversaries of new educational technologies have been debating whether and how we should be integrating new technologies into the classroom. Between these two extremes lies a more balanced view of technology as a tool or medium that has the potential to enhance language and content learning. In other words, it is not the technology itself that will transform instruction, but the purposeful and contextually appropriate ways in which it is integrated into high-quality instruction that has the power to enhance learning and education.

What is less debated is the role that recent advances in technologies, such as computational thinking and artificial intelligence (AI), play in students' lives. Developing a comprehensive understanding of how technology works has been argued to be a fundamental literacy that all students should learn, beginning in elementary school. The need for developing technological and computational literacies is especially important as computing is ubiquitous and permeates every facet of our lives, from interpersonal relationships to global politics. Furthermore, technological innovations are not only relevant in science, technology, engineering, and mathematics but are also becoming increasingly important in linguistic and humanistic endeavors.

Today, we are in a new technological era, one in which the integration of technology tools in the language classroom is designed to: (1) mediate the language teaching and learning process; (2) enhance content learning; and (3) help multilingual learners acquire new literacy skills. In working on this special issue, our goal was to focus on these interrelated areas by featuring articles that show innovative, interactive, and intelligent uses of technology. To this end, the articles in the special theme issue reflect forward-thinking practices in the areas of AI, computational thinking, digital storytelling, ChatGPT and issues of plagiarism, augmented and virtual reality, Universal Design for Learning (UDL), and mixed-reality simulations. The articles also report on research and classroom practices that are grounded in theory and pedagogy in the fields of TESOL, technology, and education. In fact, central to the special theme issue is that the articles underscore the principled ways in which technology can be used to teach language, content, and new literacies. Finally, the articles in the special theme issue feature a wide range of classrooms, including K-12 classrooms and summer camps for multilingual learners, college composition and ESL/EFL classrooms, as well as teacher preparation classrooms.

The special theme issue opens with an article by Santiago Ojeda-Ramirez, Daniel Ritchie, and Mark Warschauer titled, "AI Literacy for Multilingual Learners: Storytelling, Acting, and Programming." In this article, the authors argue for the need to teach AI literacy to multilingual learners and describe

how three pedagogical strategies--*(1) storytelling to model decision-making in AI, (2) acting as an AI to model programmability,* and *(3) learning from data and programming text-to-speech-to-text AI*--were taught in a summer camp for multilingual middle school students. Central to the pedagogical practices described in the article are the assertions that linguistic scaffolding and translanguaging will promote the acquisition of language and new literacies.

In the second article, titled, "Elementary Computing for All: A Computational Thinking Curriculum for Multilingual Students," Sharin Rawhiya Jacob and Mark Warschauer put forth both a framework and curriculum for teaching computational thinking (CT) to multilingual students. The framework and curriculum are grounded in a growing body of empirically supported and theoretically sound work examining the engagement of multilingual students in CT.

The third article, by Undarmaa Maamuujav, Soobin Yim, and Viet Vu, titled, "Rhetorical and Motivational Values of Multimodality in Writing: A Case Study Examining L2 Writers' Participation in Multimodal Academic Writing," investigated how digital storytelling, a multimodal composing strategy, was integrated in an undergraduate writing course. The study also investigated how the students' engagement in multimodal composition influenced their rhetorical choices, promoted rhetorical awareness, and influenced the students' attitudes toward academic writing.

The next short article in the special theme issue focuses on a topic that is at the center of attention in the media, the technology field, and academia: ChatGPT. The title of the article, "ChatGPT, Plagiarism, and Multilingual Students' Learning to Write," authored by Qian Du and Tamara Tate, reflects on how writing instructors might utilize ChatGPT to aid in the teaching and learning of ethics in academic writing. In doing so, they share how their exploratory experiences with ChatGPT shed light on issues such as plagiarism and academic integrity.

The last two articles in the special theme issue focus on issues of preservice teacher preparation. The first of the two articles, titled, "Implementing Universal Design for Learning in Online Courses to Support Multilingual Students in Higher Education" by Benjamin Emihovich, describes UDL, a pedagogical framework that is designed to enhance teaching and learning for *all* students. The final article of the special theme issue, written by Lía D. Kamhi-Stein, describes how mixed-reality simulations can be used in TESOL teacher preparation to strengthen the preparation of preservice teachers.

Although this special theme issue presents a wide range of ideas on the role of technology in the TESOL field, we know that the advent and adoption of AI, VR, and AR tools, as well as ChatGPT will bring about a new era in the education of English language learners. We hope that as you read the articles in the special theme issue, you identify ways in which you can integrate some of the innovative ideas described by the authors into your teaching and find areas for further research.

We want to thank the authors of the special theme issue for sharing their innovative ideas. Finally, we want to thank the editors of *The CATESOL Journal*, Robert Kohls, Rebekah Sidman-Taveau, Kevin Wong, and Margi Wald, for their support, enthusiasm, and leadership.

Sincerely,
Lía D. Kamhi-Stein and Sharin Rawhiya Jacob
Guest Editors

Authors

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