

# Leveraging Generative Artificial Intelligence, Translanguaging, and Collaborative Learning in Higher Education: A Semiotic Approach to Inclusive and Critical Thinking-Oriented Learning

The integration of Generative Artificial Intelligence (Gen AI) into Teaching English to Speakers of Other Languages (TESOL) presents transformative opportunities such as multilingual interaction, personalized feedback, and multimodal expression, however, pedagogical and ethical challenges persist around overreliance, equity, and critical thinking development. This study responds to these challenges by examining how GenAI-integrated task design guided by translanguaging and semiotic frameworks can promote learner agency, cultural representation, and responsible AI use. This theoretical review proposes a comprehensive framework grounded in translanguaging pedagogy (García, 2014) and semiotic theory (Danesi, 2000), aimed at guiding responsible, equitable, and culturally responsive use of Gen AI tools such as ChatGPT, Magic School AI and automatic speech recognition (ASR) systems in language education. We examine three critical dimensions:

- Cognitive and Critical Thinking: How Gen AI can both facilitate and impede deeper learning processes.
- Translanguaging and Multimodality: The role of AI in enabling multilingual meaning-making and mediating diverse semiotic resources.
- Equity and Ethics: Addressing systemic biases, digital access disparities, and academic integrity concerns associated with AI integration.

This presentation will present preliminary insights into translanguaging strategies across proficiency levels, GenAI's role in meaning-making, and emerging barriers or affordances for marginalized students. These findings will inform the development of a task design framework that aligns with inclusive and humanistic AI use in language education. By synthesizing current literature, this paper advocates a human-centered approach that positions Gen AI as a collaborative language partner rather than a replacement for educators. This approach ensures that technology enhances, rather than undermines, inclusive, critical, and culturally sensitive language teaching.

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**Track Classification:** Harnessing AI in TESOL: Opportunities and Challenges