SEM43. Exploring the interplay between Artificial Intelligence (AI), English-Medium Instruction (EMI) and Integrating Content and Language in Higher Education (ICLHE) settings

11 September h. 16:00-18:30, S5 Moro

Convenors
Cristina Mariotti (Università di Pavia) cristina.mariotti@unipv.it
Stefania Cicillini (Università di Torino) stefania.cicillini@unito.it
Francesca Costa (Università Cattolica del Sacro Cuore) francesca.costa@unicatt.it

Abstract
AI's integration in EMI settings can transform pedagogy, learning processes, and classroom dynamics, particularly in linguistically and culturally diverse classrooms. By pushing the boundaries of conventional practices and accelerating trends toward digitization, AI can be used to foster a more dynamic, inclusive, and student-centred learning environment. ChatGPT, for example, can have a transformative role in overcoming language barriers, fostering a confident EMI teacher identity (Tsou et al., 2024) and boosting students' learning progress (Kikuchi, 2024).

AI technologies can help with the introduction of individualized scaled solutions, the improvement of disciplinary content comprehension, and an improvement in academic success. However, these benefits bring along challenges with respect to ethical guidelines, critical evaluation skills, academic integrity of AI-assisted learning and assessment and potential digital inequality (Wanyu Ou & Malmström, 2023). Despite these premises, the interplay between AI and EMI or ICLHE contexts remains significantly underexplored in research studies as highlighted in the only existing systematic review on the topic (Bannister et al., 2023).

This seminar invites contributions that critically explore the intersection between AI and EMI or ICLHE contexts from a wide range of perspectives, including but not limited to:

- the use of generative AI tools by students and educators to enhance learning and teaching outcomes within the EMI/ICLHE framework
- the role of AI in promoting inclusivity and multilingualism in diverse EMI or ICLHE contexts
- the impact of AI on language assessment literacy and ethical considerations in EMI or ICLHE contexts
- the practical applications of AI in adjunct instruction, translanguaging practices, and disciplinary writing.

This seminar aims to open up a discussion on how AI can help in the evolution of EMI and ICLHE in higher education through both opportunities and challenges. We welcome innovative and interdisciplinary proposals that present theoretical insights, empirical findings, or practical strategies regarding the integration of AI into EMI or ICLHE practices.

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Tsou, W., Lin, A. M. Y., & Chen, F. (2024). Co-journeying with ChatGPT in tertiary education: Identity transformation of EMI teachers in Taiwan. *Language, Culture and Curriculum*, *37*(4), 529–543.

Wanyu Ou, A. & Malmström, H. (2023). 'It becomes increasingly complex to deal with multiple channels': materialised communicative competence and digital inequality in English-medium higher education in the digital era. *Journal of Multilingual and Multicultural Development*, 1–19.

SEM 43. Papers

11 September h. 16:00-18:30, S5 Moro

- *Scaffolding strategies in EMI lectures: Annotating pedagogical language with large language models* (Jane Helen Johnson, Alma Mater Studiorum Università di Bologna)
- *From one-size-fits-all to personalized EMI training: The role of AI in supporting EMI trainers* (Mariangela Picciuolo, Alma Mater Studiorum Università di Bologna)
- *The "Professional Writing Coach": A GPT-based tool for professional writing in a ICLHE context*

(Paola Carbone, Università IULM)

- *Perceptions of AI in academic writing: A qualitative study of doctoral students in a multilingual EMI context in Italy* (Stefania Cicillini, Università di Torino / Francesca Costa, Università Cattolica del Sacro Cuore / Cristina Mariotti, Università di Pavia)

SEM43. Abstracts

The "*Professional Writing Coach":* A GPT-based tool for professional writing in a ICLHE context

Paola Carbone (Università IULM) paola.carbone@iulm.it

This paper presents an experimental teaching innovation designed at IULM University to explore the potential of generative AI in ICLHE (Integrating Content and Language in Higher Education) settings. The project centers on the development and classroom integration of a custom GPT model — *Professional Writing Coach*— which functions as a digital tutor for students learning how to communicate professionally in English across a variety of real-world formats. Far from being a generic AI chatbot, this GPT has been specifically configured to support higher education students in producing effective workplace texts such as emails, press releases, persuasive letters, blog posts, speeches, and About Us pages. It is equipped with interactive tools like a *Plain English Rewriter*, *Tone Tuner*, and *Professional Synonym Bank*, designed to encourage clearer, more purposeful communication. Students receive real-time, guided feedback on tone, structure, and audience awareness, making the learning experience both highly personalized and practically oriented.

The integration of this GPT into an EMI-based university course represents not only a digital upgrade to traditional writing instruction but also a step toward rethinking pedagogical design. It supports students' development of essential skills for academic and professional success, such as:

- clear and effective written communication;
- critical thinking and revision strategies;
- awareness of audience and communicative intent;
- self-directed learning with AI-assisted feedback;
- and responsible digital tool use in academic contexts.

By sharing the design process and configuration logic of this GPT, the paper contributes to the emerging conversation on how AI can be purposefully embedded into teaching practice. Rather than positioning AI as a threat to academic integrity, the project embraces it as a catalyst for educational change—enhancing engagement, inclusivity, and readiness for professional life.

The paper offers practical insight into how educators can take an active role in shaping how AI is used in the classroom—balancing innovation with responsibility in an increasingly digital academic landscape.

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Perceptions of AI in academic writing: A qualitative study of doctoral students in a multilingual EMI context in Italy

Stefania Cicillini (Università di Torino) stefania.cicillini@unito.it
Francesca Costa (Università Cattolica del Sacro Cuore) Brescia, francesca.costa@unicatt.it
Cristina Mariotti (Università di Pavia) cristina.mariotti@unipv.it

The integration of Artificial Intelligence (AI) into higher education is prompting a rethinking of traditional pedagogical practices, particularly in linguistically diverse contexts such as English-Medium Instruction (EMI). AI tools like ChatGPT have shown potential to support students in overcoming linguistic barriers, developing a stronger academic voice, and using English more confidently for disciplinary purposes (Tsou et al., 2024; Kikuchi, 2024). However, their growing use also raises concerns related to academic integrity, the development of critical thinking, and unequal access to digital resources (Wanyu Ou & Malmström, 2023). Although interest in these issues is increasing, empirical research on the role of AI in EMI and ICLHE remains limited, as highlighted in the only available systematic review on the topic (Bannister et al., 2023). In particular, students' perceptions of AI use for academic writing in multilingual settings are still largely unexplored, yet such insights are crucial for shaping responsive and ethically grounded institutional practices.

This qualitative study contributes to this emerging field by exploring the views of 67 doctoral students enrolled in a technical university in Northern Italy during the 2024–2025 academic year. The participants, who come from a range of international backgrounds, shared their experiences and attitudes towards the use of generative AI as a tool to support English academic writing. Data were collected anonymously through open-ended survey questions and analysed using both thematic analysis and sentiment analysis.

Findings suggest a generally cautious and nuanced reception, with ethical and pedagogical concerns surfacing across responses. These findings offer insights for the design of academic writing support in the age of AI. They underscore the importance of fostering critical digital literacy and providing targeted training that acknowledges both the opportunities and the complexities of using AI for scholarly communication in multilingual settings.

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Scaffolding strategies in EMI lectures: Annotating pedagogical language with large language models

Jane Helen Johnson (Alma Mater Studiorum Università di Bologna) janehelen.johnson@unibo.it

Teachers may provide support for their students in learning new material, including both concepts and terminology, through strategies described as *scaffolding* (Bruner, 1985). While research into scaffolding has focused mainly on second language acquisition, it is also relevant for the teaching of non-linguistic subjects, more specifically in EMI. This broader study aims to harness the potential of Large Language Models (LLMs) to identify, annotate, and analyse scaffolding strategies used in a 200,000-word corpus of lectures by speakers of English as L2, for use in designing and implementing teacher training material.

Previous research into assisting students in knowledge acquisition has focussed on scaffolding devices such as mediation strategies (Molino, 2024), importance marking metadiscourse (Deroey & Taverniers, 2012; Deroey & Johnson, 2025), as well as questioning, and macro-structural lecture organisation (e.g., Ädel, 2010).

This presentation focuses specifically on a pilot study examining the viability of using LLMs such as ChatGPT to identify scaffolding strategies—in particular, importance markers—in a small section of the EMIBO corpus of engineering and social sciences lectures (Johnson & Picciuolo, 2022). This involved comparing ChatGPT's automated annotations with previously conducted human annotations (Deroey & Johnson, 2025). While there is growing interest in the use of AI for linguistic analysis, limitations for corpus annotation tasks have been noted (Yu et al., 2024; Curry et al., 2024).

Although the wider research project aims to explore a broader range of scaffolding strategies across disciplines and contribute to EMI teacher training resources, this presentation will report exclusively on the methods and findings of the pilot study, thus providing an initial assessment of LLM potential for the task.

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From one-size-fits-all to *persona*lized EMI training: The role of AI in supporting EMI trainers

Mariangela Picciuolo (Alma Mater Studiorum Università di Bologna) mariangela.picciuol2@unibo.it

As universities worldwide expand English-Medium Instruction (EMI) to support internationalization strategies, professional development initiatives for EMI lecturers have also proliferated. However, these programs are often designed and delivered by language specialists rather than disciplinary experts, frequently following a top-down training model (Macaro, et al., 2020). This disciplinary gap limits the relevance and effectiveness of EMI support for content lecturers. Meanwhile, AI integration into professional development is rapidly evolving, offering personalization, adaptive simulations, and collaborative learning (Tammets & Ley, 2023). In EMI contexts, generative AI tools such as ChatGPT are increasingly used to enhance comprehension, engagement, and inclusivity, while raising concerns about ethics and academic integrity (Bannister, et al., 2023). However, their application to EMI faculty development remains underexplored.

This study explores how EMI trainers can leverage AI to provide personalized, discipline-sensitive faculty development. It presents a case study from the University of Bologna where AI supported the application of the Persona methodology (Cooper, 1999) and individualized task generation. In this context, Personas refer to realistic profiles of EMI lecturers, capturing variations in proficiency, expertise, and classroom demographics. Traditionally based on qualitative research (Picciuolo & Johnson, 2020), Persona creation was enhanced using ChatGPT to simulate discipline-specific needs and generate tailored prompts aligned with lecturers' fields (e.g., Civil Engineering, Materials Science). Building on an andragogical approach (Weissova, et al., 2024), the AI-enhanced workshop engaged participants through multimodal, context-specific tasks reflecting authentic EMI challenges. Structured reflections and feedback were thematically analyzed (Braun & Clarke, 2006) to assess perceived relevance, authenticity, and pedagogical value.

Findings suggest that integrating AI into EMI professional development can compensate for trainers' disciplinary gaps, enhance lecturers' engagement, promote reflective practice, and foster student-centered, context-sensitive pedagogy. This study contributes to ongoing discussions on how AI can support ethical, inclusive innovation in EMI settings.

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