

# Embracing Interdisciplinary Collaboration: Enhancing English Medium Instruction Research Through STEM and International Partnerships

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## Abstract:

*This article explores how interdisciplinary collaborations, particularly with STEM fields and international linguists, enhance English Medium Instruction (EMI) research. By integrating STEM methodologies, researchers gain deeper insights into language processing and policy impact. International partnerships offer diverse cultural perspectives, enriching the understanding of EMI in varied contexts. These collaborations challenge conventional thinking, fostering innovative approaches in applied linguistics. Embracing interdisciplinary and international cooperation is crucial for advancing EMI research and uncovering the complexities of language education.*



As experts in the realm of applied linguistics, particularly in English Medium Instruction (EMI), we often navigate complex linguistic landscapes (Macaro et al., 2018). EMI is defined as *“the use of the English language to teach academic subjects (other than English itself) in countries or jurisdictions where the first language of the majority of the population is not English”* (Macaro, 2018, p.18). A transformative approach I’ve found invaluable in my research journey is interdisciplinary collaboration, notably with STEM fields and international linguists. This writing explores how such collaboration can significantly enrich our research and understanding in applied linguistics.

### **STEM Collaboration: A New Lens**

My journey in interdisciplinary EMI collaboration began with a British Council-funded project alongside STEM scientists. Prior to this collaboration, my research, though statistically focused, was limited to conventional linguistic frameworks and lacked interdisciplinary breadth. Through this collaboration, I was exposed to novel STEM methodologies and logical rigour. Working with STEM scientists introduced me to new analytical tools and computational models, enhancing my ability to uncover intricate patterns in language usage within EMI settings. This experience transformed my approach, making my research more integrative and innovative, combining statistical analysis with fresh interdisciplinary insights.

This partnership brought to light nuances in language teaching & learning, acquisition and usage in this discipline. We worked together to identify patterns and trends in language use within STEM EMI settings. This was particularly enlightening in understanding how EMI policies translate into actual language usage and acquisition within the STEM field. Tsui and Tollefson (2007) highlight the need for a more holistic approach to language policy research, one that incorporates varied perspectives and methodologies to capture the true essence of language policy impact – such as EMI language policy.

These collaborations aren’t just about borrowing tools from STEM; they offer a fresh perspective on language. Working with STEM professionals encourages us to think more logically and systematically, bringing a new level of rigor to our research (Curle, 2018). By integrating methodologies like statistical analysis and computational modelling, we gain insights into language processing, acquisition, and pedagogical approaches in EMI settings.



## Overseas Collaboration: Diverse Perspectives

Another dimension of interdisciplinary work is collaborating with applied linguists across the globe. I have had the privilege of working with linguists from across the Middle East (Curle et al., 2022; Derakhshan, Rakhshanderoo & Curle, 2021), Asia (Kaya, Yuksel, & Curle, 2023) and Europe (Curle et al., 2024) on various EMI projects, examining the effectiveness of EMI in diverse cultural contexts. These partnerships have provided a rich tapestry of perspectives and methodologies to my research. We have combined qualitative approaches like interviews and classroom observations with quantitative methods like surveys and language assessments. What has stood out in these collaborations is the diverse understandings of EMI. For example, while my colleagues from Europe often emphasise the importance of English proficiency and academic success, partners from the Middle East focus on the socio-cultural implications of EMI, such as identity and language preservation. These differing priorities have enriched our research, highlighting the multifaceted nature of EMI and its varied impact across different educational contexts. While we share a common field, our approaches and interpretations vary significantly based on our cultural and academic backgrounds. This diversity has led to more comprehensive research findings, highlighting the multifaceted nature of EMI and its impact across different educational contexts.

The synergy of STEM and international collaboration in EMI research cannot be overstated. It challenges our preconceived

notions and encourages innovative thinking. We start to see language not just as a system of communication but as a dynamic entity influenced by numerous factors, including technological advancements and cultural differences.

## Concluding Thoughts

To early-career researchers and seasoned experts alike, I advocate for embracing interdisciplinary and international collaborations. These partnerships push the boundaries of our understanding and open new avenues for research. They equip us with tools and perspectives to better understand the complexities of EMI and applied linguistics as a whole. The journey of an applied linguist is ever-evolving, and interdisciplinary collaboration is a key to unlocking its full potential. Whether it's integrating STEM methodologies or collaborating with international peers, these approaches enrich our research, offering deeper insights into the fascinating world of language education.

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