Editorial:

Introduction to the special issue on English medium instruction: Areas of research needing urgent attention

1. Introduction

English medium instruction (EMI), both in higher and secondary education, is now a well-established field of education research and, indeed, many applied linguistics journals are publishing regularly on a variety of EMI topics. Recently, a new journal, *Journal of English-Medium Instruction*, has been established that is dedicated entirely to this area of academic enquiry. Recent years have also seen several special issues emerge on topics within EMI in journals such as *Applied Linguistics Review* (published advanced online), *System* (in 2023), and *TESOL Quarterly* (in 2018).

2. Defining EMI

In our introduction to this special issue, we adopt the following definition taken from Macaro et al. (2018) in their systematic review of the subject: “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” (p. 37). There has been some useful discussion in the literature about the suitability of the term EMI itself, about the above definition and about the constituency that the definition represents. For example, Dafouz and Smit (2014) prefer the term EMEMUS (English-medium education in multilingual university settings) because it “is semantically wider,” and “does not specify any particular pedagogical approach or research agenda” (p. 399). Likewise, the British Council often refers to *English medium education*, to emphasize “teaching, learning, research and administrative dimensions” (Curle et al., p. 12). There is
also the widely used term CLIL (content and language integrated learning) which, although tending to be reserved for the pre-tertiary phases of education, has nevertheless found its way into publications examining the use of English (instead of the majority language of the population) to teach content subjects in universities. Models of higher education (HE), where language support courses are given a more prominent place in the curriculum, have been referred to as CLIL-ized EMI (Moncada-Comas & Block, 2022). A few authors (e.g., Pecorari & Malmström, 2018) have proposed that the term EMI should represent a wider constituency than that of non-Anglophone countries by arguing that similar challenges are faced by students whose first language (L1) is not English when they opt to study in higher education institutions in countries such as the USA, the UK or Australia.

Despite these useful and indeed necessary debates, the term EMI appears to date to have stood the test of time, it has been used in preference to CLIL for HE, and it has overwhelmingly been applied to countries where a policy decision has been made at some level to allow (or impose) the use of English instead of the local language to teach academic subjects (e.g., sciences, social sciences, and to a lesser extent the humanities). It is these policy decisions, made at whatever level (and their consequences), that provide the overwhelming interest of researchers in the EMI field, as illustrated in several systematic reviews on the topic (Graham et al., 2018; Rubio-Alcalá et al., 2019; Macaro et al., 2018; Williams, 2015).

3. Areas of research needing urgent attention

Despite this rapidly growing research interest in EMI we felt, as prospective editors of this special issue, that there remain a number of areas for which there is an urgent need for further high quality research. In our call for papers we therefore stated that we particularly welcomed submissions on five areas (whilst not excluding others).

The first of these areas is the impact of EMI on content learning (i.e., the learning in the intended subject or discipline) with a particular focus on objective measurements of student outcomes. To date, this particular research question has been answered somewhat remotely, that is, eliciting opinions from EMI teachers and students about how the medium of instruction has affected content learning outcomes (Hua, 2020; Kamaşak et al., 2021; Wang et al., 2018) rather than by directly measuring those outcomes themselves, notable exceptions being Dafouz and Camacho-Miñano (2016), and Rose et al. (2020), although both of these studies lack a comparative reference point. Clearly one of the major questions that all stakeholders should be asking themselves is to what extent content learning is affected (positively or negatively) by learning a subject through a second language (L2; see Macaro, 2018, for a discussion about the extent to which a slowing down
in content learning can be tolerated). Those stakeholders need to be informed by high quality and carefully targeted research.

The second area that we felt needed further exploration was the impact of EMI on student English language proficiency, with a particular focus on what kind of proficiency (or linguistic knowledge) was likely to improve. As suggested above, stakeholders would want to balance any rigorously measured improvement in English language skills with any potential deleterious impact on content learning. But a question arises what skills and linguistic knowledge are improved by EMI versus, for example, general English learning (e.g., English as a foreign language). In other words, where is the true language impact, if any, and what academic purpose does it serve?

The third area is in relation to the challenges posed by transition from secondary education (K12) to higher education. In a forthcoming chapter (Macaro et al., forthcoming), we have argued that the following may all have an impact on the success of transition between these phases and in relation to EMI: the differences in physical, pedagogical and cultural environment of schools and universities (remoteness from home, class sizes, homogeneity of student groups, etc.); the relationships between teachers and students; the extent to which both phases adhere to the concept of integrating language learning into content learning; differences in the actual language of instruction (e.g., L1 medium of instruction in secondary to EMI in tertiary).

The fourth area that we felt needed more in-depth research was the extent to which EMI students in tertiary education were themselves taking responsibility for their learning. Put differently, there is a need to shed light on the strategies that students deploy in order to meet the challenges of EMI and/or make their learning more effective. Some initial attempts have been made to probe this area (Macaro et al., 2019; Soruç & Griffiths, 2018; Zhou & Rose, 2021) but, given the wealth of research on language learner strategies in EFL/MFL contexts, we believed more research was necessary when the claimed major objective of EMI in tertiary education was content learning.

The fifth area that we felt was an important emerging one was EMI and gender (Macaro & Akincioglu, 2018). We felt it important to explore whether EMI contributes to a re-equilibration of those subjects which have traditionally been regarded as “gendered,” such as, for example, STEM (i.e., science, technology, engineering and mathematics) subjects, or whether EMI further contributes to gender disparity.

Lastly, in our call for papers we stated that we particularly welcomed submissions from research carried out in those countries which to date have not featured prominently in EMI research.
4. Papers in the special issue

This special issue includes nine papers of empirical work on EMI contexts around the world. The papers cover seven national contexts: Morocco, Sri Lanka, Vietnam, Korea, Spain, Turkey and China. Five of the papers cover secondary school education, four cover higher education (three cover both). These papers can broadly be grouped into three categories: 1) papers on teacher and student perceptions in under-researched EMI contexts; 2) studies of the effect of EMI on language learning and academic outcomes; and 3) research into teacher and student strategies in EMI.

4.1. Teacher and student perceptions: EMI in under-researched contexts

The first paper in the issue is by Salah Ben Hammou and Abdelaziz Kesbi on the topic of EMI in Moroccan secondary schools. It explores the perspectives of 18 secondary math and science teachers’ in regard to new policies promoting EMI in Moroccan education. The study used grounded theory methodology to code interview data to reveal a tapestry of perspectives of the increasing use of English against a background of French-medium and Arabic-medium education. Results revealed the greatest barriers of EMI policy implementation to be teachers’ low English proficiency. Rather than curtailing the trend towards EMI, the authors call for extending EMI even further into Moroccan primary and middle school education, buoyed by teachers’ calls for a switch to English as first foreign language, instead of French, in all levels of schooling. The case of Morocco speaks to the growing trend of Francophone post-colonial contexts which are switching from French-medium instruction to English-medium instruction. Research emerging out of other parts of Africa, such as Rwanda and Cameroon, has suggested that the switch to EMI can cause injustices for children’s basic education (Milligan, 2022), and is accompanied by complexities and challenges in multilingual countries (Kuchah, 2016). Thus, it will be important to monitor the long-term impact of policy shifts such as that outlined in the Moroccan study.

In our second empirical paper, Nadee Mahawattha and Romola Rassool explored the challenges posed to students during the important transition from L1 medium secondary education to EMI higher education in Sri Lanka. Their study explored the experiences of 30 students and 18 lecturers at three universities to unveil damaging sub-cultures underpinning the use of English in Sri Lankan education. These included “ragging” practices, which undermine EMI policies by explicitly discouraging students to use English in class due to the socio-political and privileged status of English. The case of Sri Lanka sheds light on the complexities associated with the use of English language when tied to post-colonial legacies, which are still intertwined with a contested element of privilege.
and power in society. This paper suggests that, in order for the transition to EMI to be successful, not only do universities need to focus on improving academic literacies, but they must also tackle structural and institutional barriers that may prevent students from fully embracing the medium of instruction.

4.2. Measured impact of EMI effectiveness

In our third paper, Jang Ho Lee, Hansol Lee, and Yuen Yi Lo present a meta-analysis of the effects of EMI-CLIL on secondary-level students’ English learning. This important paper directly answers our special issue call for research on the effectiveness of EMI on English language development. Their study synthesized data from 7,434 learners from 38 different studies. It revealed complexities surrounding several moderator variables that may influence EMI effectiveness, including the linguistic closeness of learners’ L1s to English, the homogeneity of the comparison groups in the studies, whether productive or receptive dimensions of English learning are measured, and whether outcome measures focus on vocabulary. The study has important implications to improve EMI research as well as to enhance our current understanding of the complexities surrounding measuring language gain. Up until this point in time, we have seen several systematic reviews and rapid evidence assessments on the effect of EMI-CLIL on language gain (e.g., Graham et al., 2018; Murphy et al., 2020), but very few meta-analyses. This paper fills this important gap.

In our fourth paper, An Nguyen explored student English proficiency as a predictor of success in EMI in Vietnamese higher education. In her study, she drew on data from 111 students majoring in international business, and used the Duolingo Test as a direct measure of proficiency. On the surface, she concludes that EMI students exhibited higher levels of English language proficiency than their counterparts who were taught the same curriculum in Vietnamese. However, further analysis of student differences showed the relationship between student English proficiency and medium of instruction was not equally distributed across sub-groups of learners, with females and students from lower income families benefitting more from EMI. The paper suggests that research into the relationship between medium of instruction and language development is complex, and needs to take into account the myriad of individual and sociolinguistic factors that students bring to the metaphorical learning table, which might inhibit or assist in language acquisition.

In the fifth paper, María del Mar Sánchez-Pérez investigated the impact of EMI on English writing proficiency within the context of a Spanish undergraduate engineering program. This paper embodies a pre-test post-test research design comparing the writing development of EMI engineering students to a group of
English as a foreign language (EFL) learners in order to explore the effectiveness of EMI to improve writing as compared to traditional foreign language curricula. Results of both quantitative and qualitative writing measures indicated a positive influence of EMI on students’ writing proficiency in terms of lexical accuracy and vocabulary, but no discernible impact on syntax, grammar, organization or fluency. Based on these findings, the author challenges the oft-cited assumption that EMI by itself can enhance students’ English language, and thus is a substitute for traditional language instruction. This study provides a basis for the conclusion that exposure to language via EMI alone is not sufficient to improve students’ written English proficiency beyond their lexical development. The author lobbies for EMI programs (at least those which embody CLIL-ized formats) to include language support to ensure the dual aims of content and language learning are being met.

In the sixth contribution, the final one in this group of papers, Dogan Yuksel, Adem Soruç, Baris Horzum, and Jim McKinley present the results of a study in Turkey which explored the interplay of English language proficiency, language learning anxiety, and self-regulation with academic success. Data in the study were drawn from 705 EMI students across two disciplines (i.e., social sciences and engineering) via psychometric measures of anxiety and self-regulation, and direct measures of language proficiency and EMI course performance. The study design adds to a growing body of research which explores the role of non-linguistic factors in determining EMI success (e.g., Lasagabaster, 2016; Rose et al., 2020; Thompson et al., 2019; Xie & Curle, 2022). Findings revealed that anxiety and self-regulation impact EMI students’ proficiency across both academic disciplines. Both self-regulation and proficiency were found to impact EMI students’ academic success in engineering, but proficiency was only a significant predictor in and of itself for academic success in the social sciences. This paper adds to findings of disciplinary differences in linguistic demands of EMI.

4.3. Research into teacher and student strategies and practices in EMI

In the seventh paper, Sihan Zhou and Gene Thompson report on their empirical investigation of students’ self-regulated listening during their first semester of transition to an English-medium transnational university in China. The authors propose listening to be one of the most crucial skills when adjusting to EMI in higher education, as much as content at university is delivered through lectures. They collected data from 316 students at three points in time during the students’ first semester and revealed significant variability in the participants’ use of listening strategies throughout the transition period. They observed a “watershed” moment at the midterm, where students have to adjust their strategic learning to grapple with new
realities of listening to academic content at university which is revealed to be very different from their prior listening experiences in high school. They drew several implications from the research, such as for the EMI curriculum to structure topical knowledge and to incorporate EMI strategy training in the language support programs during the first year of study. Other papers drawing on this larger-scale study can be found in Zhou and Rose (2021) as well as Zhou and Thompson (2023).

In the eighth paper, Jiye Hong continues her recent work on language-related episodes in EMI classrooms in Korea (see also Hong, 2022; Hong & Basturkmen, 2020). In this new study, she explored content teachers’ and lecturers’ use of corrective feedback in English-medium high school and university classrooms. The study specifically explored moments when EMI teachers focus on correcting students’ language use. Data were drawn from classroom observations of six different EMI classes in high school and university settings and compared the frequency and types of corrective feedback across the two settings (i.e., high school vs. university) as well as across disciplines. Findings indicated that the schoolteachers provided corrective feedback more frequently and in more varied forms than university lecturers. The findings are intended to raise awareness of various ways to provide EMI students with corrective feedback, which has implications for EMI teacher training and professional development.

Rounding out the special issue, we have a paper from Jiangshan An and Ann Childs, which explores classroom interaction in EMI science classes, with a particular focus on teacher questions, wait time, and student output. The study sought to address the reasons behind an observed lack of student output in EMI (see Lo & Macaro, 2012). Analyses was carried out on measures of wait time and teacher higher order thinking questions (see Chin, 2007), on classroom interactions in 30 EMI science lessons from seven EMI high school programs in China. Findings indicate that use of teacher higher-order thinking questions is not associated with increased student output. However, wait time does seem to lead to greater student output. The findings have implications for EMI teacher professional development to train instructors to use wait time as an effective approach to prompt greater students’ productive involvement in the classroom. Further work on this larger project can be found in An et al. (2021) as well as An and Thomas (2021).

5. Reflections: Meeting the aims of our special issue

Reflecting upon the numerous aims of the special issue, some were met and others require further research attention. We now have a growing body of research on the relationship between EMI and language learning, which joins the extant literature on CLIL. We would nevertheless argue that further research is needed that measures potential gains in discipline-specific language. That is,
general English language proficiency tests such as the *Cambridge Preliminary English Test* in Yuksel et al. (this issue) or *Duolingo* in Nguyen (this issue) might skew findings in favour of traditional EFL rather than the types of discipline-specific and genre-specific gains in academic literacy which may be occurring as a consequence of EMI. We would stress that further research is needed to build on the results of this special issue, and those reported elsewhere.

In terms of the effects of EMI of content learning, only one paper in our special issue (i.e., Yuksel et al.) broached this area. While there have been several studies exploring the effects of CLIL on content learning in schools, very few EMI studies have investigated this issue with appropriate comparison groups of L1 medium of instruction. This is perhaps due to the nature of self-selection in EMI programs in higher education, creating methodological difficulties in establishing equitable benchmarks for L1 medium of instruction. Nonetheless, in order to fully evaluate whether EMI is having a deleterious effect on subject learning (see Macaro, 2018), more research into this area is still needed.

The third aim of the special issue, which was to explore the period of transition from L1 medium high school to EMI higher education, has been broadly met by several papers. Hong (this issue) provides a comparative exploration of language use by teachers and instructors in each context to better understand how language related episodes were constructed. Zhou and Thompson (this issue) explored the adjustment to listening in the crucial first term of an EMI program in China. Mahawattha and Rassool (this issue) speak to the sociolinguistic complexities surrounding students’ linguistic identities when moving into an EMI environment which is laden with postcolonial legacies. These studies, while important, either explore different students in high school and university, or only investigate students upon entry into EMI. What is needed in future research is a longitudinal investigation that tracks the same students from high school into higher education to gather a complete picture of the EMI transition process.

The fourth area of students’ and teachers’ strategic behaviors seems to be one domain where current research is flourishing, as we are seeing more papers that focus on constructs such as self-regulation, learning strategies, and teaching strategies in EMI. Given that the boom in EMI in much of the world is contextualized by a lack of language support (see Galloway & Rose, 2021) and a lack of EMI teacher professional development (see Macaro et al., 2021), teacher and student agency in ensuring successful implementation of EMI is paramount. We hope to see further research in this area in the future, which can lead to better professional development programs for EMI teachers, and better support programs for students so they can take control over their own learning processes.

The fifth area we had hoped to cover in the special issue, the role of gender in EMI, has gone largely unaddressed, despite it being a critical area of empirical
inquiry. Upadhaya and Sah (2019) have argued that “access to English is a strong indicator of socio-economic success for girls” (p. 111) in many developing countries, and clear disparities can be seen in male and female students’ access to English-medium education. Uworwabayeho, Milligan and Kuchah (2021) have found that there are significant disparities in girls’ English results compared with boys in lower secondary education in Rwanda. The importance of higher education in terms of improving employment opportunities has been documented across countries, particularly in terms of women’s participation in the job market (e.g., Barone & Assirelli, 2020; Chang, 2018). We need to better understand the complexities surrounding gender and EMI in terms of restricting or potentially widening access to education across various disciplines and national contexts.

With the inclusion of several different nations, the final aim of our special issue, that is, to shed light on EMI contexts that have thus far been under-represented in published research, has been partially met, but we want to stress that more research is needed. As EMI continues to have an impact on local education systems, research from scholars working within these systems is needed to better understand local challenges that may have global relevance. Our current understanding of EMI is skewed towards Western educational systems (with research from and on European universities). We have also seen a proliferation of research within nations that exhibit strong or growing research cultures in higher education, such as China, Japan and Turkey. What we now need is more research in under-represented and under-resourced areas, such as South Asia and Sub-Saharan Africa.

In our special issue, some papers on important contexts did not get through our review process, ultimately rejected by reviewers due to a lack of methodological rigor or a lack of contextualization within current research literature. This is an unfortunate result of an inherent bias in academic publishing that favors researchers working in high-resourced centers of research knowledge. There is also inequity in the socio-political contexts in which many researchers in under-represented contexts work. The contributors from Sri Lanka in this special issue, for example, had to write and revise their papers to a deadline in a context of intense political upheaval and daily power cuts which limited computer and Internet access to a few hours per day. These are clearly not equitable platforms from which to build research, and from which to judge academic merit. We call for future researchers of EMI to forge ties with researchers in under-represented contexts to engage in collaborative research to address inequities and shed light on these important and relatively unknown contexts. We also encourage reviewers and journal editors to evaluate research from under-represented areas not only on their methods and knowledge of the literature, but on their important contributions to knowledge in terms of their unique perspectives and contexts. Only then will
we start to develop a knowledge of the full extent of EMI policies and practices on a truly global scale.

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References


