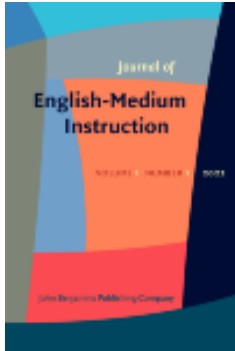


# English language teaching and EMI: Putting research into practice

Jim McKinley, University College London  
Heath Rose, University of Oxford



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## Abstract

The role of English language teaching (ELT) in English medium instruction (EMI) can vary widely depending on education policy objectives and teachers' responses to EMI students' language and learning needs. In this paper, we provide a narrative review of a growing number of studies reporting language-related challenges as the foremost barrier to successful implementation of EMI. Such research highlights the fundamental roles that English for Academic Purposes (EAP) and English for Specific Purposes have in the provision of targeted language support for EMI students. Based on this review, we set a future research agenda, calling for explorations into the efficacy of English language programs for supporting EMI students to reach educational outcomes. We also call for explorations of greater collaboration between English language practitioners and content lecturers to ensure the right type of language support is being provided to students. The paper ends with a discussion for the need to reposition EAP as English for Specific Academic Purposes to ensure students' specific academic needs are met. Essentially, universities offering EMI will need to account for their unique institutional characteristics to ensure ELT provision is central in organizational and curricular structures; otherwise, they may be setting their own students up to fail.

**Keywords:** English language teaching; TESOL; English medium instruction; English for Academic Purposes; English for Specific Purposes; Higher Education

## Introduction

With increased internationalisation initiatives in higher education across the globe, English medium instruction (EMI) has been the focus of attention for education policymakers, researchers, educators and learners, all with their own questions about how to understand learning objectives. Does the introduction of EMI simply refer to changing the language of instruction to English, without any language-specific objectives? Or is EMI meant to have a dual focus, to foster the development of both content and English language skills? On this crucial discussion, we refer to two key definitions of EMI. The first is Macaro's (2018) oft-cited clarification that EMI is "the use of the English language to teach academic subjects (other than English itself) in countries or jurisdictions where the first language (L1) of the majority of the population is not English" (p. 19). The second is Taguchi's (2014) definition

of EMI as “curricula using English as a medium of instruction for basic and advanced courses to improve students’ academic English” (p. 89).

These two definitions position English language teaching (ELT) in EMI differently. Macaro’s places ELT outside EMI, where we find models that rely on preparatory or concurrent language classes in addition to (but separate from) content classes. Other models of EMI in practice may ignore any need for language support. Taguchi’s places ELT inside EMI, where pundits have argued such provision is better described as content and language integrated learning (CLIL), or at the tertiary level, integrated content and language in higher education (ICLHE)—models that have been around for a very long time and may better embrace teaching approaches in a foreign language, as well as have the potential to inform EMI development (Pecorari, 2020). We, thus, need to explore the intersection of language and content across these wide definitions, as they encompass a fuller picture of content and language teaching practices as they pertain to language-related issues in EMI.

At this intersection is where we focus our paper—where language teaching and EMI come together in a growing body of research. This is where the applied linguists’ claim over EMI research is the strongest, as it fosters a deep understanding in the field of language acquisition, language learning and language instruction with the emergent global phenomenon of EMI. It is at this “crossroad” that ELT and EMI “can exist in a very natural symbiosis, and can potentially inform each other, both in research and in practice” (Pecorari & Malmström, 2018, p. 497).

In this paper, we provide a *narrative review* of a growing number of studies reporting language-related challenges as the foremost barrier to successful implementation of EMI. A narrative review differs from a systematic review in that the review represents the perspective of an individual author or group of authors who are not claiming to remove bias from the selection of studies they include (Macaro, 2020a). By investigating the intersection of ELT and EMI, this paper first explores the current status quo of research into language education in EMI to take stock of current knowledge in the field. Based on this foundation of knowledge, we then outline an agenda for future research. Finally, we outline key implications for how to best contextualise ELT practices in EMI.

## **Where are we now?**

With the rapid growth of EMI research and implementation in the 21<sup>st</sup> century, the field of ELT has expanded in new directions. In this section, we provide an overview of the growing number of studies that have investigated language issues in EMI from an ELT perspective. We start with an overview of studies that report on language-related issues in EMI, as these have often been used as a starting point to address the needs of students. Such research highlights the fundamental role that English language teachers play in the provision of targeted language support for EMI students.

### *Language-related difficulties in EMI*

English language proficiency has been a focal point in many investigations into students’ EMI experiences. Such studies have pointed out various linguistic challenges in the learning of content via a foreign language (e.g., Belhiah & Elhami, 2015; Costa & Coleman, 2012; Hellekjær, 2010; Hu, Li & Lei, 2014; Macaro, 2018; Wong & Wu, 2011). A primary reason

for these challenges is that many students are entering into EMI university programs ill-prepared for the level of proficiency required. Classroom-level research into the four academic skills (listening, speaking, writing and reading) has been instrumental for revealing the areas that pose the greatest difficulties for EMI students.

On students' listening comprehension, research has highlighted students' difficulty with some EMI teachers' accents (Tange, 2010), and following lectures in general (Hellekjær, 2010). Even in EMI contexts where English proficiency is higher among the general population such as in Norway, scholars have concluded that comprehension diminishes in EMI compared to instruction in students' L1, and some of the issues revolve around students being unaccustomed to lecturers' accents (Hellekjaer, 2010). Other factors affecting students' comprehension of EMI content are the frequent use of specialized vocabulary (Chan, 2015), spontaneous and ad hoc lecture delivery styles that are harder for students to follow in their L2 (Evans & Morrison, 2011), and strained concentration due to listening in a L2 (Hua, 2020).

On EMI students' speaking difficulties, it has been noted that students have problems delivering oral presentations or taking part in seminar discussions (Kırkgöz, 2009). A lack of an ability to produce content knowledge in English is of concern, as "a learner is unconvinced that he/she has assimilated a concept until he/she has 'expressed it'" (Ball & Lindsay, 2013, p. 54). Thus, if EMI students are merely passively engaging with content, their processing of this content is likely to be very shallow. Hesitancy around speaking has also been noted to affect classroom interaction in EMI contexts, where research has showcased the difficulties students have expressing content in English and speaking in front of others (Kırkgöz, 2009). EMI courses have been reported to involve less interaction compared with instruction in the teachers' and students' L1 (Lo & Macaro, 2012; Pun & Macaro, 2019; Thøgersen & Airey, 2011). Students also need to be trained in the appropriate classroom discourses for their specific disciplines of study (Dafouz et al., 2018) Such research stresses a need to practice and develop classroom interaction skills, spoken productive abilities, and discipline-specific discourse knowledge.

Writing has been noted to be a skill that many students struggle with in EMI contexts. In Hong Kong, one of the largest challenges faced by students was difficulty in producing written essays in an appropriate academic style for the content discipline (Evans & Morrison, 2011). As students are often assessed on their writing in universities, especially in the humanities and social sciences, these challenges can directly affect how well students perform academically. Many of the difficulties students face center on an unfamiliarity with academic discourses, genres, and referencing conventions (e.g., Abouzeid, 2021; Eriksson, 2018; Pessoa et al., 2014), which vary from discipline to discipline. Other writing challenges extend to practical skills, which are relevant across all disciplines, such as a difficulty to take notes in English from academic texts (Andrade, 2006).

In terms of reading processes, research has revealed that many EMI students have difficulties comprehending textbooks, mainly due to an abundance of unfamiliar words (Andrade, 2006) and specialist, technical vocabulary (Kırkgöz, 2005). The pervasiveness of new terminology in discipline-specific textbooks has been noted to severely impact EMI students' reading comprehension overall (Uchihara & Harada, 2018). Other research has found that an inability of undergraduate students to grapple with technical and academic terms severely impacts the completion of assigned reading tasks for EMI courses (Tatzl, 2011). Reading processes are often slowed down by an overreliance on dictionary use and mental translation of English terms, which is a strategy found to be time-consuming and ineffective (Chan, 2014).

Many student difficulties with the four academic skills have an underlying commonality of the impact of vocabulary knowledge on educational outcomes. Much research has highlighted a lack of requisite vocabulary knowledge to learn through English as a major obstacle faced by students in EMI contexts (Başibek et al., 2014; Chang, 2010; Evans & Green, 2007; Kırkgöz, 2009). In the context of Hong Kong, Evans and Green's (2007) study revealed that a lack of vocabulary knowledge—especially academic vocabulary (i.e., vocabulary used in academic speech and writing across disciplines) and technical vocabulary—was one of the largest hurdles for students to understand academic content in EMI programs. Similar results were found in a study by Chang (2010) in Taiwan, in which students from technical disciplines experienced difficulties understanding fundamental concepts in EMI courses, linking reduced academic performance to inadequate vocabulary knowledge. Two further studies in Hong Kong found insufficient vocabulary familiarity to severely detriment students' comprehension of their English medium lectures (Lin & Morrison, 2010), understand their textbooks, or participate in discussions (Evans & Morrison 2011). The findings of the latter study revealed students' difficulties with technical vocabulary, at different levels depending on their discipline. Because vocabulary use differs from discipline to discipline, students' vocabulary needs also differ across various EMI programs.

#### *Academic language-related English support in EMI*

The clear difficulties that students face in EMI have invited scholarship to investigate the ways in which preparatory English language programs can support students' academic needs. Evans and Green (2007) led a good deal of seminal scholarship on students' difficulties associated with the four academic skills, measured by a 45-item EMI Challenges questionnaire. This work was originally driven by a goal to inform preparatory EAP programs in Hong Kong to better ensure curricula is targeting the academic challenges students faced in EMI. Their study investigated the language problems experienced by almost 5,000 students in Hong Kong in an English-medium university, concluding that EAP course materials needed to better address problems surrounding academic writing and academic speaking. A study by Lee and Lee (2018), which included a survey of over 3,000 students in a Korea, also highlighted writing as the most problematic language skill.

Aizawa et al. (2020) extended the work of Evans and Green (2007) to a Japanese higher education context by adopting their EMI Challenges questionnaire. This study found that, contrary to the above research, writing was not the most challenging skill reported by students at one Japanese university. The researchers attribute this difference to “the large focus on writing development in the 18-month academic foundation program in the context of [the] study” (p. 19). This conclusion offers some circumstantial evidence that English language preparatory programs may have an effect in alleviating commonly observed problems encountered by EMI students.

Kamasak et al. (2021) used the same questionnaire to conduct a partial replication study in the Turkish context. Similar to the findings in Hong Kong and Korea, they found writing to be the most challenging academic skill. This study also highlighted statistically significant differences in the challenges reported by the student and their prior English language preparation. Specifically, they found that students who entered English medium programs via the one-year preparatory program experienced greater difficulties across the four academic skills, challenging the efficacy of this program in adequately preparing students for EMI. They also

found students in the social sciences to have more difficulties with reading and writing than engineering students, which they attribute to higher literary demands in the social sciences.

Evans and Morrison (2011) used the questionnaire again with 3,000 students supplemented by interviews with 28 students to further investigate the language related challenges of first year students in Hong Kong in relation to prior experiences. Their study concluded that students from different high school backgrounds require different levels of support. Evans and Morrison also found large differences in productive and receptive vocabulary between students entering university from English medium and Chinese medium high school systems, revealing less than two percent of university students from Chinese language high school backgrounds had enough academic vocabulary knowledge to comprehend university course content. Aizawa and Rose (2020) conducted a partial replication of this study in a Japanese context, also finding high school background to be strongly related to productive and receptive vocabulary knowledge and ease of study in an EMI context. They conclude that even ‘soft’ EMI experiences in Japanese medium high schools such as listening to instructions in English, writing essays in English, and giving academic presentations in English, eases students’ transition to EMI in university. Both studies conclude with calls for different levels of EAP and ESP support for learners in university to address differing student needs associated with their educational backgrounds.

#### *Disciplinary differences in English needs*

A common thread running throughout these studies is disciplinary differences in language needs of students in EMI contexts. One of the most cited articles investigating the use of EAP across disciplines in EMI is Bolton and Kuteeva’s (2012) survey of 4,524 students at Stockholm University. The survey found the use of English and students’ needs differed according to discipline, with more pervasive use of English in the sciences, where it was observed to be a “pragmatic reality” (p. 444). This finding also concurs with numerous other studies that have found disciplinary differences. A later paper by Kuteeva and Airey (2014) observed very different language needs of EMI according to their discipline of study, which required different approaches to language planning to meet these needs.

Evidence consistently shows that language use differs, language issues differ, and language needs differ according to discipline (e.g., see Chan, 2015, on language use in mathematics; see Evans & Morrison, 2011, on language issues such as disciplinary acculturation; see Kuteeva & Airey, 2014, on disciplinary language needs). The implications of these differences are that university wide preparatory EAP courses may not be sufficient to meet the needs of most students across disciplines. This was a key finding by Galloway and Ruegg (2020) who found the growth of EMI in China and Japan had been accompanied by the provision of numerous compulsory pre-sessional *and* in-sessional EAP courses, as well as self-access language support services such as writing centres to help students overcome academic skills-related problems. However, they also found that the type of support offered by EMI programs varied, and many faculty members and students criticized the relevance of generic EAP support programs. Evans and Morrison (2011) drew similar conclusions in Hong Kong by arguing that generic EAP course were unable to meet the long-term needs of students. However, they also pragmatically outlined the complexities of offering more tailored support, stating “it is doubtful whether a highly discipline-specific course could have accomplished much more in practical terms,” especially as the “process of institutional and disciplinary acculturation is so complex that it would take a raft of finely tuned English courses to address students’ diverse and evolving needs during their university careers” (p. 206).

Despite the practical barriers in place to offer students the right type of English language support, the growth of EMI has clearly expanded the role of the ELT practitioner in many universities from a teacher of English as a foreign language subject to a teacher of EAP and ESP (Galloway & Ruegg, 2020). Many researchers have argued for the need for EAP and ESP supplementary courses to be offered concurrently to EMI (Schmidt-Unterberger, 2018; Uchihara & Harada, 2018). There is a growing awareness that preparatory programs insufficiently prepare students for specific needs in many EMI contexts, whereas concurrent and on-going targeted support may be more efficacious in meeting students' needs. This shift in focus opens up a number of avenues for the profession, as it highlights a greater need to ELT to become more structurally intertwined with English medium education.

### **Where should we go next?**

In the second part of this paper, we will address the need for generating a clear research agenda concerning the role of ELT as a key part of EMI. This agenda seeks to explore key issues, such as 1) how EAP and ESP instructors can help students to be successful in their content learning; and 2) how to facilitate collaboration between content and language teachers.

#### *Linking ELT with EMI success*

While EAP and ESP research has a rich history in ELT, especially in Anglophone university settings, to date very little research has explored measurable effects of English language support on students' experiences and success in EMI contexts. This research is vital to better understand how EAP and ESP curricula can best serve students' needs. While the topics of collaboration with subject specialists and team teaching have a long history in ESP, we note that they are increasingly relevant to *emerging* EMI contexts. A future research agenda should build on studies that have been conducted to investigate this area in greater depth, thus bringing together expertise of ESP and EMI researchers.

One study in Japan explored the effects of ESP courses, baseline language proficiency, and motivation in predicting students' success in their first English medium course at a Japanese university, concluding that students' performance in preparatory ESP classes was the strongest predictor of success (Rose et al., 2020). Having found language learning motivation to be a poor predictor, the researchers further explored the same dataset with additional self-efficacy measures, finding this variable to be a powerful predictor of success alongside ESP (Thompson et al. 2020). The qualitative data from student interviews further revealed that the ESP classes helped to raise students' self-efficacy. However, neither of the studies provided rich detail of what the ESP curricula at this university included. Future research should aim to draw more on ESP research to provide more concrete connections between the types of activities in ESP courses that lead to better outcomes in EMI.

Another study in Oman of 174 first year students revealed a relationship between students' vocabulary size, academic writing and their GPA, indicating that vocabulary size and superior ability in academic writing might lead to higher levels of success in EMI (Harrington & Roche, 2014). The study concludes that vocabulary measures and writing tasks might be useful to identify at-risk students after enrollment in EMI for the purposes of offering them appropriate language support. The study did not, however, elaborate on what these support programs should include, and whether vocabulary development via support programs will lead to

academic success. This opens up avenues for future research to explore the efficacy of such curricula in raising students' academic performance.

In one of the few studies that interrogates the effectiveness of English language support, Chang et al. (2017) report on the development of a bespoke language support course to help students with targeted areas of difficulty in an EMI program at a Korean university. The language support program, which was in the form of a series of workshops, was based on a needs analysis and included up to 134 students at the largest attended session. Results of the pilot project did not show gains in the target language skills, but students indicated that they found the workshops helpful in meeting their needs. The findings of this study were likely limited by the exploratory nature of the pilot study, where curricula were being developed and trialed for the first time, on a short voluntary basis. Nonetheless, the research design could serve as a blueprint for future research into the development and evaluation of more established language support programs at other universities to investigate their efficacy in meeting students' language needs. Another study in the Swedish context reports on the re-design of a writing assignment to help students better understand written genres in Engineering, resulting in improvements in students' written work (Eriksson, 2018). The intervention was created in collaboration with communication specialists within the Engineering department, highlighting the benefits of drawing on disciplinary expertise in language curriculum design to support EMI.

#### *Exploring collaboration in ELT and EMI*

An area of vital future research is to explore best practices of collaboration between ELT practitioners and EMI practitioners. To address the discipline-specific needs of students, especially in emerging EMI contexts, Galloway & Ruegg (2020) argued that collaboration between language and content specialists is urgently needed. In their study, students believed content teachers had a duty to help them with their language-related needs, despite this being beyond the skill sets of most content specialists due to a lack of knowledge and training in language education. One solution to this is to bring language teachers into content classes to create collaborative environments. In a recent study in China, collaboration between language and content teachers was observed as standard practice at two transnational universities, where content teachers worked with language teachers to provide credit-bearing writing courses for students, which were tailored to discipline-specific genres (McKinley et al., 2021). The study did not, however, investigate the efficacy of such collaboration, highlighting an area of future investigation.

The benefits of team-teaching have been demonstrated in the Spanish context (e.g., Lasagabaster, 2018; Lasagabaster et al., 2018). As Lasagabaster (2018) astutely concludes in his review of team-teaching in EMI:

Future research studies, however, should showcase team teaching based on a longitudinal approach, because I consider that this is the most appropriate if team teaching is to be regarded as a useful and effective experience by teachers, students and university authorities... .. To this end, empirical evidence on the effectiveness of team teaching is sorely needed given the rapid spread of EMI at university. (p. 412-413)

While the benefits of team-teaching have been demonstrated at the pre-university level in CLIL environments (Pavón et al., 2015), a greater empirical basis is needed to explore the efficacy of team teaching in English medium higher education. Indeed, the relationship between disciplinary and language specialists and the difficulties of cross-disciplinary collaboration can sometimes be fraught (see e.g., Arkoudis, 2006). Some reporting has been carried out on case

studies of collaborative teaching in Turkey, where the benefits have been demonstrated (Macaro et al., 2016), although more research of this type is clearly needed. Through such research, we will be better able to demonstrate how English language teaching can be best integrated in collaborative teaching efforts between language and content specialists.

### *A future research agenda*

The research gaps indicated in the literature review have raised a number of unanswered questions at the nexus of ELT and EMI, which we have formulated into eight research agenda items below:

1. What is the relationship between language support courses (e.g., preparatory and/or concurrent EAP/ESP) and later academic performance in EMI?
2. What curricular elements of language support best prepare students for EMI?
3. How can at-risk students be identified according to their language gaps? And how can ELT be best adapted to target their needs?
4. Can targeted ELT programs (EAP/ESP) mitigate the language-related challenges experienced by students in EMI contexts?
5. How can language support courses address the vocabulary needs of students in EMI contexts across a range of disciplines?
6. What ELT tasks have self-efficacy raising benefits for students engaged in EMI?
7. What are the demonstrable effects of team-teaching for content learning? That is, does the inclusion of a language educator in EMI classrooms improve the quality of students' learning experience?
8. If content teachers are required to address students' language needs in EMI courses, how can this be achieved in contexts where a knowledge of ELT may be lacking?

As EMI is context specific, what is needed to address these questions is in-depth, longitudinal investigations of language support in action, with measurable outcomes to showcase educational outcomes.

### **How do we put it into practice?**

The impact of EMI is especially salient to practitioners working in the internationalized and "Englishized" higher education sector, who are increasingly teaching on EAP and ESP programmes in EMI settings. As outlined in the previous two sections of this paper, a growing body of evidence has highlighted challenges associated with EMI and calls for more nuanced and integrated academic language support programmes for students, that may be better explored through longitudinal case studies and ethnographic methods. Understanding such language support has clear implications for the field of ELT, as it increasingly intersects with movements towards English medium forms of education. In the final part of this paper, we offer several suggestions, mainly concerning macro-level policy issues for consideration by practitioners involved in curriculum development, for putting research into practice to establish what we see as effective positioning of ELT within an EMI context.

### *Re-positioning EAP as ESAP*

Some scholars have lobbied for greater movement from EAP to English for Specific Academic Purposes (ESAP), which has clear implications for EMI as such structures may prepare students by accounting for disciplinary needs. Flowerdew (2016) explains, while EAP is "concerned with the provision of English for students in all fields of study, ESAP is focused on the needs of students from specific disciplines" (p. 7). ESAP is, therefore, better able to



target the appropriate discipline-specific technical vocabulary, which numerous studies have highlighted as a key challenge for EMI students (e.g. Macaro, 2020b). ESAP is also able to target the academic tasks required of students in a particular discipline, including appropriate writing genres, which has also been noted as a major obstacle for students (e.g. Eriksson, 2018).

The movement towards ESAP for many existing ELT practitioners is not necessarily an easy one, as it requires teachers to develop their own knowledge of the content subject and specific competencies related to the target discipline (Flowerdew, 2016). This means it might only be practical for language teachers working in EMI contexts to specialise in one or two related disciplines in order to come to grips with the specific genres, terminology, and disciplinary needs. The payoff for this effort, as Flowerdew (2016) argues, will be to make ELT more central to the degree subject, leading English language teachers to have a more fundamental and respected role within the university. A clear barrier to the implementation of ESAP are university structures that separate ELT from subject teaching (discussed next), as well as the substantial financial costs involved in creating bespoke curricula for students entering various disciplines and subjects of study, which require contributions from both language and subject specialists.

### *Situating ELT as a central part of EMI*

In many countries (particularly in East and Southeast Asia), EMI is seen by government stakeholders as ‘killing two birds with one stone’ to achieve internationalization goals and improve English proficiency of domestic students. However, this is not followed through in institutional-level policies, or in actual classroom practice, where EMI is entirely content-focused. That is, government policy tends more toward EMI in terms of Taguchi’s definition while institutional-level stakeholders use Macaro’s. This difference in definitions leads to a gap in aims and intended outcomes. Coming to common ground on the intended outcomes seems to be a required first step in situating ELT anywhere within EMI.

To situate ELT as a core part of English medium education requires an explicit policy investment of universities to change the structures of many departments. As Lasagabaster (2018) notes:

“Ideally EMI courses should be underpinned by ESP and EAP courses, but unfortunately this is currently not the case in many higher education institutions. In fact, in many European universities ESP and EAP courses have been eliminated as a result of the restructuring of curricula brought about by the implementation of the Bologna process<sup>1</sup>” (p. 401).

As a result, EAP and ESP are notably absent from many course structures. When they do exist, they have been pushed out to the periphery of the main academic activities of the university. Language support is often relegated to affiliated language centres of many universities, which are structurally, and at times physically, separated from the university’s academic faculties and divisions. These structural issues are also the result of neo-liberal activities of many universities, which have experienced the recent marginalization of EAP departments (Flowerdew, 2016; Hadley, 2015) in contexts where support is provided in a tuition-based model prior to admission to the university for students who are unable to meet language proficiency requirements. In such structures, it may be difficult to provide students with the targeted and ongoing ESAP that is needed in EMI, and thus requires universities to re-structure

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<sup>1</sup> The Bologna process is a set of agreements established between European countries to ensure comparable standardization and quality of higher-education qualifications.

their organisations to make ELT more central.

### *Accounting for contextual differences*

When considering the implications of EMI research on ELT practices, it is important to acknowledge that EMI contexts vary considerably. Thus, successful practices at one institution might prove inappropriate at others. Linking back to definitions presented at the start of this paper, the positioning of ELT in EMI is conceptualised very differently across contexts, from being internal, external, or even invisible in many English medium program structures. Moreover, even if an explicit effort is made in institutions to provide structured language support, the way that this is achieved within the curriculum varies drastically. For example, Macaro (2018) describes two model program structures, where language support is provided as part of an English medium curriculum. The first is the "preparatory year model," in which language teaching occurs before students enter an English-medium degree. An example of this would be in many universities in Turkey, where students enter a one-year preparatory program before going into their degree subjects (Sahan, 2020). The second model is the concurrent "institutional support model," where students are provided in-session English language courses while undertaking their English medium degree subjects. An example of this is universities in Hong Kong, where students take EAP courses, mainly in their first year, while at the same time, taking English-medium degree subjects.

Richards and Pun (2021) further delineate EMI into a typology of 51 categories across 10 dimensions, which illustrates the diverse curricular contexts within which EMI operates globally. The authors state that the typology can be used as "a navigator to guide curriculum planners as well as content and language teachers to find 'suitable' sets of parameters to implement effective EMI teaching according to their cultural and classroom contexts" (p. 15). Within the dimension "Purposes of EMI" the authors make the distinction between "Content EMI" and "Proficiency EMI" to relay the centrality of language learning goals as part of the curriculum. In Proficiency EMI program-types, there may be greater scope for ELT to become a structurally incorporated part of the curriculum, as the goal of EMI is explicitly noted to improve students' proficiency in English. As a result, universities are more likely to invest the necessary resources into ensuring this goal is met. In Content EMI program-types, ELT might be more peripheral to the curriculum, offer fewer resources, bestow little to no credit-bearing weight, and therefore be more constrained in terms of its impact. The scope and constraint of ELT within each of these two curricular types is likely to be vastly different as a result.

The typology also includes five categories that highlight the varying levels of integration of English as a subject and English medium instruction. These include "independent" types of programs, where ELT occurs separately from EMI, and "supportive" types where ELT typically include integrated support for EMI. Obviously, the latter type provides much greater scope to offer the type of ESAP that this paper has lobbied for. Thus, the opportunities and challenges associated with integrating ELT with EMI will greatly depend on what type of EMI context language teachers find themselves working within.

### *Conclusion*

We are at a stage in EMI research where we have developed a broad picture of the language-related needs of EMI students. We acknowledge as a limitation of this paper the reliance on our review of studies that draw on self-reported questionnaire data, which can of course be unreliable. Respondents are known to have difficulty answering questions with full

truthfulness. This is one reason why survey research into language difficulties in Applied Linguistics is generally thought to be insufficient, and why more in-depth and reliable measures are usually preferred. Indeed, English L1 students may report similar difficulties with academic writing. We also note that the framing of language difficulties in this study by skills areas does not align with current integrated conceptualizations of academic competencies. However, this was done to reflect the data available.

As these needs depend on the EMI program structure, the discipline, and the background of the students, further contextualised investigations into student needs are required to inform targeted language support programs. Building on this understanding, a next vital step for the further development of ELT in EMI is to explore the effects of language support programs on the educational outcomes of English-taught courses. Key constructs that have been highlighted as being of central importance to educational success are academic and technical vocabulary knowledge, self-efficacy, and writing competencies, so these are areas of particular future research interest. Finally, this paper has outlined several structural obstacles that are preventing the optimal integration of ELT within EMI program structures. Thus, if universities continue to expand their EMI offerings as part of their internationalization agenda, they need to equally invest in organizational structures to ensure ELT is positioned as central, rather than peripheral, to the curriculum. As Dafouz et al. (2018) rightly state: “the development of lecturers’ specialized academic disciplinary language, the creation of suitable language-specific learning objectives, and the materials to support these will need to become firmly embedded in the roles and training of TESOL practitioners and the strategic plans and policies for internationalization of HEIs employing or aiming to employ EMI” (p. 559). To not devote resources and professional development to ensure students are adequately supported during this unfettered growth in EMI is tantamount to universities setting their own students up to fail. Thus, the integration of ELT into EMI—especially in emerging contexts—is not only research-led good practice, but also a moral and ethical responsibility of universities.

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Jim McKinley, University College London, IOE Faculty of Education and Society, 20 Bedford Way, London WC1H 0AL, United Kingdom. Email: [j.mckinley@ucl.ac.uk](mailto:j.mckinley@ucl.ac.uk) (corresponding author)

Heath Rose, University of Oxford Department of Education, 15 Norham Gardens, Oxford, OX2 6PY, United Kingdom. Email: [heath.rose@education.ox.ac.uk](mailto:heath.rose@education.ox.ac.uk)