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English in higher education – English medium
Part 1: Literature review

Edited by Nicola Galloway

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About the editor

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Definitions and terms

Cognitive academic language proficiency (CALP): The language proficiency level of students in the domain of formal language of academia. Often used in conjunction with the term basic interpersonal communicative skills (BICS).

Content-based instruction (CBI): CBI is a language teaching methodology where the study of language is via subject matter.

Common European Framework of Reference for Languages (CEFR): A guideline used to describe achievements of learners of foreign languages across Europe and, increasingly, in other countries.

Content and language integrated learning (CLIL): A dual focused educational approach in which an additional language is used for the learning and teaching of content and language.

Codeswitching: The use of separate and multiple linguistic codes (or languages).

English for Academic Purposes (EAP): EAP is a branch of English for Specific Purposes that focuses on language aspects, genres and skills that are relevant for students' academic studies at university.

English as a subject (EAS): English in formal education systems where home language is the medium of instruction and English is (often) taught as a core and compulsory subject.

English as a foreign language (EFL): The learning and teaching of English to people whose primary language of communication is not English in countries where English is not the primary language of communication.

English for General Purposes (EGP): EGP aims to provide a broad foundation of English especially in contexts where needs are difficult to specify.

English for General Academic Purposes (EGAP): EGAP focuses on genres, skills and language aspects common in many academic contexts.

English as a lingua franca (ELF): The use of English as a language used in international and intercultural communication in contexts where speakers' first language is not necessarily English.

English for Specific Academic Purposes (ESAP): An approach that targets discipline or subject-specific needs of students by focusing on genres and skills that are relevant for their academic success in a specific course.

English for Specific Purposes (ESP): An approach that focuses on academic, professional or occupational needs of learners and aims to meet such learner needs by concentrating on linguistic features, genres, and skills that are relevant in the specific academic, professional or occupational variety of English.

English medium education (EME): The teaching of academic subjects through English in contexts where English is not the primary language of communication. This term emphases the multilingual nature of English medium and teaching, learning, research and administrative dimensions.

English medium instruction (EMI): The teaching of academic subjects through English in contexts where English is not the primary language of communication.

Full EMI programmes: Materials, assessments, teaching and learning of an academic subject is in English in a context where English is not the primary language of communication.

Partial EMI programmes: Programmes in which materials, assessments, all teaching and learning are partially in the primary language of communication, partially in English. Definitions of partial EMI programmes differ from country to country and, in some cases institution to institution.

Higher education institutions (HEIs): Universities, colleges and professional schools that provide preparation in such fields as law, theology, medicine, business, music and art.

L1: A speaker's first language or languages. The local language used for everyday communication in a context.

L2: A language or languages learned in addition to the first language or languages. In this study the L2 refers to English as an additional language (be it L2, L3, L4, etc.) and most importantly not the first language spoken by the majority of the population.

Massive online open course (MOOC): A MOOC is a form of distance education that provides unlimited and open access to learning materials and often gives an introduction to a subject field or a specific area of a subject field. Materials can be accessed via the internet and usually include filmed lectures, readings, quizzes and interactive forums.

Second language acquisition (SLA): The process of learning and acquiring an L2.

Translanguaging: The fluid use of multiple languages as an integrated system of communication.

Codeswitching: The use of separate and multiple linguistic codes (or languages).

Transnational education (TNE): Education delivered in a country other than the country which is the awarding institution.

Medium of instruction (MoI): The language used in teaching and learning.

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Introduction

The use of English as a medium to teach and learn in higher education (HE) has grown exponentially over the last ten years (Macaro, Curle, Pun, An & Dearden, 2018). English medium instruction (EMI) is defined as the use of the English language to teach academic content in places where English is not the first language of the majority of the population. Content learning is often the primary objective. Language learning is often not an explicit educational aim. However, several alternative definitions have been proposed, highlighting the complexity of the term and diversity of approaches to implementing EMI policy. In some contexts, it is very much aligned with goals to develop English language proficiency, and some scholars argue that EMI includes Anglophone as well as non-Anglophone settings. Others prefer the term English medium education (EME), which focuses on all aspects of teaching, learning, research and programme administration. Whatever definition is adopted, however, EMI or EME has clear differences with English as a subject (EaS), where English is taught as a subject itself, although it should be pointed out that the growth in EMI has led to a significant demand for English for Academic Purposes (EAP) and English for Specific Purposes (ESP) classes.

EMI in HE is now widespread around the world with particular growth in the last two decades. It has been referred to as an 'unstoppable train' (Macaro, 2015, p. 7) and there has been increased reference to EMI in national education policies around the world. Various factors explicitly and implicitly (often simultaneously) impact EMI growth, including:

- specific inclusion of EMI in HE policies
- desire to grow international reputation of HE system
- pressure to increase institutional rankings
- role of higher education in countries' knowledge diplomacy
- bilingual education policies at primary and secondary level
- policies towards English in the workplace.

Taken together, one issue underpinning many of these factors is the internationalisation of HE.

Internationalisation is often a key driver of and motivation for the growth of EMI. Teaching in English is often seen to be a 'symbol' of internationalisation. The adoption of EMI in HE is also closely related to increased recruitment of international students and staff, transnational education (TNE) programmes and the assumption that EMI can provide access to intercultural learning opportunities for students. There are also several perceived benefits of EMI at the institutional, individual, and country levels. Commonly perceived benefits include increasing international student revenue, increasing institutional rankings, developing students' English competencies, developing students' employability, and providing access to teaching materials.

The decision to adopt EMI is clearly complex and contextual. Unsurprisingly, different driving forces and perceived benefits have led to variations in the approaches taken by individual HE institutions or programmes to adopting EMI. Although the use of EMI has increased across universities globally, EMI programmes are implemented in a variety of ways, depending on the local context. Factors which influence the implementation of EMI include the driving forces behind its introduction, language education policies, provisions for language support, and language proficiency requirements for students and staff. EMI programmes can also vary in terms of how much English is used for teaching and learning in the curriculum.

While EMI provision is on the rise, numerous challenges have been reported by both lecturers and students. Language-related challenges have been widely reported, for example, content lecturers using EMI in HE not viewing themselves as language instructors, not being able to use humour to build rapport with students, as well as not sharing a common language with students (particularly international students). Both students and content lecturers using EMI have reported an increase in teaching and learning workload, and needing more teaching preparation and studying time. Discussions on challenges in EMI also relate to debates over the use of the L1 in the EMI classroom. Research on attitudes toward L1 use in EMI settings suggests that faculty and students perceive the L1 as a useful resource for content comprehension. Academic staff are also reported to oppose L1 use because it would exclude international students and violate official policy. Classroom observation studies have also indicated that the L1 is commonly used in EMI classes.

Further, despite the well-documented number of challenges, approaches to supporting staff and students vary. In many contexts, English proficiency benchmarks for students are often low or non-existent. There are also huge variations in students' preparedness for EMI courses and there are calls for context-specific support based on a thorough needs analysis. There are also calls for support systems for teaching staff as well as calls for increased collaboration between subject and language specialists.

In this literature review, we examine the research on all of these issues in relation to EMI in HE. We begin with definitions of EMI and the growth of EMI in HE. We then examine EMI in the context of internationalisation and the main driving forces behind and perceived benefits of EMI. We then look at approaches to implementing EMI policy, followed with an examination of the successes and challenges of studying through English. We report on quality assurance mechanisms and end with an examination of literature on student and staff support.

2

Defining EMI

Main takeaways

- EMI is defined as the use of the English language to teach academic content in places where English is not the first language of the majority of the population.

- In English medium (EM) classes, content learning is often the primary objective. Language learning is often not an explicit educational aim.

EMI has been defined a number of different ways in the literature. Among the most commonly cited definitions is the one proposed by Macaro (2018), which states that EMI is '[t]he 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 populations is not English' (p. 19). In EMI programmes, the primary objective is often content learning, and English is a second, foreign or additional language (L2) for the majority of students.

Although Macaro's (2018) definition of EMI captures the phenomenon in many contexts, alternative definitions have been proposed which highlight the complexity of the term and diversity of approaches to this form of tuition. Taguchi (2014) proposes a definition of EMI with explicit language learning aims: EMI programmes are defined as 'curricula using English as a medium of instruction for basic and advanced courses to improve students' academic English proficiency' (Taguchi, 2014, p.89). This definition of EMI brings it closer to content and language integrated learning (CLIL) – 'a dual focused educational approach in which an additional language [second, foreign or minority language] is used for the learning and teaching of content and language' (Coyle, Hood & Marsh, 2010, p.1) – than Macaro's (2018) definition, which does not include language learning as a course objective.

Other scholars (e.g. Humphreys, 2017; Jenkins, 2019; Pecorari & Malmström, 2018) have argued that the definition of EMI should be expanded to include Anglophone contexts (e.g. US, UK, Australia) in addition to non-Anglophone settings, since the number of L2 English speakers in many Anglophone countries has increased due to forces of global migration and student mobility in HE. Universities in both Anglophone and non-Anglophone contexts have seen an increase in the number of international students enrolled on degree programmes (see *Growth of EMI in higher education*). Scholars (e.g. Baker & Huttner, 2016; Jenkins, 2019) have argued that the growing number of international students at universities in Anglophone countries has created multilingual educational contexts similar to those of many EMI settings. Other scholars (e.g. Dafouz & Smit, 2016; 2017; 2020) have responded to the growth in international student numbers across higher education institutions (HEIs) by proposing definitions that focus on EME, rather than instruction. In line with the multilingual nature of many universities, EME emphasises 'the particular role that English plays both as an academic language of teaching and learning as well as a means of international communication' (Dafouz & Smit, 2016, p. 399). Moreover, because it is a broader term, definitions of EME capture aspects of teaching, learning, research and programme administration in university settings that extend beyond *instruction*. For example, the broad scope of EME includes interaction between students or the work of programme administrators which would not be described as instruction.

What various definitions of EMI have in common is recognition of diversity based on context and key differences between EMI and English as a subject (EaS). In EaS classes, the English language is taught as a subject itself, such as English for General Purposes (EGP), English for Academic Purposes (EAP) or English for Specific Purposes (ESP). Although the growth of EMI has led to an increased demand for

EaS classes, particularly EAP and ESP classes, the aims of EaS and EMI are distinct. As noted, and in contrast to EaS, language learning is not normally an explicit objective in EMI programmes. Rather, it is typically incidental or implicit in EMI (Pecorari & Malmström, 2018), and EMI instructors rarely offer language-focused instruction (Costa, 2012; Jiang, Zhang & May, 2019). This distinguishes EMI from other forms of education such as content and language integrated learning (CLIL) or content-based instruction (CBI) which – to varying degrees – incorporate explicit language teaching and goals to improve students' English proficiency. Figure 1 illustrates the continuum of content and language learning aims in various educational programmes, although debate continues over the placement of programmes along this continuum as research highlights that different stakeholders, often within the same programme, place the EMI programme at different points on the continuum.

This debate underscores the diversity of EM programmes, and interpretations of the meaning of the term, in context.

Although language learning is not usually an explicit aim of EMI, many stakeholders view EMI as an opportunity for students to develop their English language skills alongside their academic content knowledge (Rose & Galloway, 2019). Galloway et al. (2017, 2020) found that English language learning was the main reason students enrolled in EMI programmes. In other words, a 'widely purported benefit of EMI is that it kills two birds with one stone… [and] students simultaneously acquire both English and content knowledge' (Rose et al., 2019, p. 2). Despite these purported aims, there is mixed evidence concerning the effectiveness of EMI for English language development (see *Success and challenges of studying higher education through English*).

Figure 1: Continuum of programmes that integrate content and language learning (adapted from Met, 1999)

Focus on content — EMI — Immersion — CLIL — CBI — EAP/ESP — EFL — Focus on language

3

Growth of EMI in higher education

Main takeaways

- The use of EMI in HE is widespread around the world and has grown in popularity over the last two decades.

- An increase in national policies towards EMI has influenced the uptake of EMI provisions around the world.

While growth of EMI provisions is pronounced across all levels of education around the world (see, for example: Dearden, 2014), EMI's adoption is particularly prevalent in HE (Fenton-Smith, Humphreys & Walkinshaw, 2017; Wächter & Maiworm, 2014). In the last two decades, there have been exponential rises in EMI programmes offered in HEIs globally (Dearden, 2014; Macaro, Curle et al., 2018). Although there has been limited systematic or longitudinal data gathered about the full extent of its adoption, Dearden's (2014) research with British Council staff estimated that more than 90 per cent of private universities and over 78 per cent of public universities globally allowed the use of EMI. EMI has become what some might call an 'unstoppable train' (Macaro, 2015, p. 7), particularly, as detailed in *Perceived benefits* of EMI, the reasons for adopting EMI are complex and unique to individual countries and institutions.

Regional growth in EMI use is most readily documented for non-Anglophone countries in Europe, Asia and the Middle East. In Europe, for example, there has been a rapid increase in the numbers of English-taught programmes since the early 2000s (Maiworm & Wächter, 2002; Brenn-White & van Rest, 2013; Wächter & Maiworm, 2008, 2014), particularly at the master's level and in business and science subjects (Brenn-White & van Rest, 2013).

Maiworm and Wächter (2002; Wächter & Maiworm, 2008, 2014), for instance, outlined a 1,000 per cent increase in English-taught programmes in Europe since 2002. In this regard, geographic divisions exist, with EMI more readily used in Northern European countries (particularly Scandinavian and Baltic countries) than those in Southern Europe (Hultgren, Jensen & Dimova, 2015). EMI provisions in Europe have, in part, been driven by the Bologna Agreement, which emphasised freedom of movement for HE students across Europe (although language is not specifically mentioned in the policy) (Saarinen & Nikula, 2012). However, it is recognised that EMI is driven by other institutional, national and global factors in Europe (Hultgren et al., 2015), with wide varieties between universities (Hultgren, 2014a).

Similar growth patterns are demonstrated in Asian countries, with rising numbers of universities adopting EMI in the last two decades (Fenton-Smith et al., 2017). Much of this growth can be attributed to national HE strategies in many Asian countries which position EMI as a core strategic goal across academic disciplines. Prominent examples include China's Project 211 and Project 985[1] (Rose, McKinley, Xu & Zhou, 2020) or Japan's Global 30 and Top Global University projects[2] (Aizawa & Rose, 2019; Galloway et al., 2020). Other regions in Asia, such as South Korea (Kim, 2017) or Taiwan (Yang, 2015), have seen similar increases in the number of EMI programmes through individual institutional strategies. For example, it has been estimated that over 9,000 EMI programmes are offered in South Korea (Byun, Chu, Kim, Park, Kim & Jung, 2010) and 92 universities in Taiwan offer full degree programmes taught in English (Yang, 2015). However, the data documenting these trends is sparse; for example, relatively little is currently known about the extent of EMI use in countries in Southeast Asia.

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1. Project 211 was announced by the Chinese Ministry of Education in 1995, allocating funding to 119 universities to raise their research and teaching profiles on the international stage. Project 985 followed in 1998 with specific funding allocated to 39 top-tier universities to strengthen their 'world-class' status through new research centres and facilities, international research activities, and attracting international scholars (for more details, see Ryan, 2011).

2. In 2009, Japan's Ministry of Education, Culture, Sports, Science, and Technology (MEXT) launched the Global 30 programme, which aimed to increase international student attendance at 13 Japanese universities through EMI undergraduate programmes. This was replaced in 2014 by the Top Global University Project, which focuses on increasing Japanese universities' rankings in the global top 100 institutions, broadening strategies beyond EMI programmes to include hiring international and internationally trained staff, increasing international student recruitment, and providing financial support for international students (for more details, see Ha, 2013).

In the Middle East, similar pushes have been made since the 1980s to increase the number of university programmes taught in English. Much of this has been linked to growth in TNE (see *Programme and institutional mobility*). For example, the United Arab Emirates (UAE) has seen increases in the number of English-speaking university branch campuses, doubling between the years 2000 and 2009 (Weber, 2011). In other cases, English for academic study at the primary and secondary level has manifested in increased EMI provisions at the university level across the disciplines, as is the case for Saudi Arabia (McMullen, 2014; Ha & Barnawi, 2015), although this is not well documented with data. Trends are additionally seen in countries such as Oman, where the majority of the 40 universities opened since the 1980s have been taught through EMI (Al-Mahrooqi & Denman, 2018).

Limited public data or research has historically been available on EMI provisions in HE in Latin American countries (Macaro, Curle et al., 2018), but there nonetheless are examples of its rising use (British Council, 2019). One example is Brazil, where 16 universities have now provided undergraduate-level EMI classes since 2010, perhaps influenced by its large (but now discontinued) Science Without Borders programme which funded university students in science, technology, engineering and mathematics (STEM) subjects for a degree abroad (Martinez, 2016). Similarly, mandated English for academic study at the primary or secondary school level has led to increased EMI interest for HE in countries such as Colombia (Corrales, Paba Rey & Santiago Escamilla, 2016) or Argentina (Porto, Montemayor-Borsinger & Lopez-Barrios, 2016).

Data is similarly not systematically compiled for countries in Africa (Macaro, Curle et al., 2018), but trends also point to a significant role for English in HE. In many cases, English-taught programmes and universities (as well as at primary and secondary level) are a legacy of colonialism, often historically developed at the expense of teaching using local languages (Mampane, Omidire & Aluko, 2018). For example, the majority of universities in South Africa have historically operated in English (21 out of 35 universities in 1994; 15 out of 22 universities in 2004) (Du Plessis, 2006), despite English being the first language of less than ten per cent of the population (Statistics South Africa, 2012). However, there has been a resurgence of Afrikaans medium instruction and bilingual universities in the country across disciplines in recent decades (Du Plessis, 2006), linked to rising arguments for Africanisation

and decolonisation of HE (Kamwendo, 2016). Yet in other cases, declines in enrolment for French-speaking programmes in countries such as Rwanda, Tunisia and Morocco have led to increasing incentives for EMI (Knight, 2015), although limited data is available in these contexts.

In this regard, it is worth noting that EMI adoption has not been universally accepted and there has been contention or decline in some contexts around the world. For many situations, this is linked to the role of language in national and cultural identity making. For example, in Gulf countries such as Qatar or the UAE, some universities have recently reverted back to teaching in Arabic in an effort to maintain national identity in the face of globalisation (Belhiah & Elhami, 2015). In Europe, similar backlashes in countries such as the Netherlands (Matthews, 2018), France (Gallix, 2013) and Sweden (Bolton & Kuteeva, 2012) have positioned EMI as a threat to national languages and cultural identities. In other countries, there are contentions between national language policies and universities' adoption of EMI, such as Malaysia's constitutionally mandated use of the Bahasa Malaysian language (Ali, 2013). While such cases are highly contextual and individual, these issues highlight that EMI adoption is not linear or without dispute. This is compounded by the limited data available to systematically map EMI's rise or decline over time in individual countries, between institutions or between disciplines.

Growth in EMI policies

Alongside the growing use of EMI in HE, there has been rising reference to EMI in national education policies around the world. Figure 2 summarises some of the main factors that explicitly and implicitly (often simultaneously) impact this growth. In some cases, EMI has been specifically embedded into policies towards HE, such as in the UAE (Weber, 2011), China (Rose et al., 2020) and Japan (Aizawa & Rose, 2019; Galloway et al., 2020). In these instances, EMI is typically linked to the development agendas of the country's HE sector through establishing or improving its international reputation (Costa & Coleman, 2013). Such endeavours are also linked to pressures to increase institutional rankings (see *Perceived benefits of EMI*) and/or internationalise (see *EMI in the context of internationalisation*).

In other cases, EMI might be seen as a tool for knowledge diplomacy, whereby the HE sector is assumed to play an important role in international relations between countries (Knight, 2015).

One significant example of this is China's Belt and Road Initiative,[3] which places educational exchange between countries along the Silk Road Economic Belt as a key international relations strategy (Li, 2018) and has led to an increase in EMI. An international example of this is the European Union's Bologna Agreement,[4] which has led to EMI being used to support the international exchange of students across borders (Räisänen & Fortanet-Gómez, 2008; Saarinen & Nikula, 2012), although the policy doesn't explicitly mention English. In these instances, such policy initiatives have often led to a top-down transitions towards EMI (either nationally or through interpretation of individual institutions), whereby universities or instructors find teaching in English 'enforced' upon them. In this regard, a wide variety of research around the world has outlined conflicting perspectives between policies and instructors' own views towards EMI's usefulness and effectiveness (Macaro, Curle et al., 2018).

Similarly, wider policies towards developing English proficiencies at school levels have led to increased EMI provisions at the HE level, despite many definitions of EMI lacking an explicit language goal (see *Defining EMI*). This is prevalent in regions such as Latin America, as noted previously, where policies towards bilingual education and EMI at the primary and secondary level have impacted interest in EMI in HE (Corrales et al., 2016; Martinez, 2016; Porto et al., 2016). Similar trends have been shown in Saudi Arabia, where English for academic study is prominent in primary and secondary education (McMullen, 2014; Ha & Barnawi, 2015). Shifts towards EMI in Saudi Arabia are also a result of policies unrelated to HE. For example, many medical education programmes in the country have turned to EMI following policy changes towards using English in hospital administration (Suliman & Tadros, 2011).

Taken together, one issue underpinning many of these factors is the internationalisation of HE, which we turn our attention to next.

Figure 2: Factors that implicitly and explicitly impact EMI policy development

3. China's Belt and Road Initiative is a development strategy announced in 2013 regarding Chinese-led and funded infrastructure development and other investments in 71 countries (called the 21st Century Silk Road), focused primarily across East, Central and South Asia, Eastern Europe and parts of Africa. Projects funded by the Belt and Road Initiative are wide-ranging across many sectors, including education investments, economic loans, support for infrastructure development, and construction (for more details, see Peters, 2020).
4. The Bologna Agreement was originally signed in 1999 by countries in Europe to ensure that HE standards between countries in the region are of comparable quality. This has resulted in a basic framework for HE qualifications in Europe, along with a European Credit Transfer and Accumulation System (ECTS) to standardise credit transfers between countries (for more details, see Piro, 2016).

4

EMI in the context of internationalisation

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Main takeaways

- The adoption of EMI in HE is closely related to increased recruitment of international students and staff at universities around the world.

- TNE programmes often lead to increased EMI provisions, as most branch campuses originate from English-speaking countries.

- Assumptions are often made by countries or universities that EMI can provide access to intercultural learning opportunities for students, but this is not necessarily substantiated by current research.

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Much of the increase in EMI provisions can be attributed to factors related to internationalisation of HE. In this context, internationalisation is classically defined by Knight (2004) as 'the process of integrating an international, intercultural or global dimension into the purpose, functions or delivery of post-secondary education' (p. 11).

This is a purposefully broad definition, as approaches to internationalisation are often complex and take on various meanings between individual HEIs (Knight, 2004). Although internationalisation of HE has been in focus since the 1980s (Knight, 2004; 2006; 2013), it has been previously labelled a 'fuzzy' term (Kehm & Teichler, 2007) as it might broadly include any activities related to incorporating international aspects into a university's teaching, research and service delivery (Hudzik, 2011). Many activities might fit within the overarching concept of internationalisation (de Wit & Leask, 2015), often focusing on providing opportunities for students to gain experience or knowledge about other countries and work with peers from different cultures (Stohl, 2007).

Within these varied definitions, there is growing recognition that internationalisation of HE must go beyond simply *globalisation*. In this sense, globalisation of education can be considered as the increasing interconnectedness of educational processes around the world, often characterised by the mobility of students and staff (Altbach, 2002). Instead, in line with the British Council's own perspectives towards internationalisation, attention is turning towards the need for more purposeful engagement with developing authentic intercultural learning experiences (Gu & Schweisfurth, 2011; Lomer & Anthony-Okeke, 2019; Mittelmeier, Rienties, Tempelaar, Hillaire & Whitelock, 2018). In this way, internationalisation efforts must consider pedagogies and learning tasks which 'cannot be completed satisfactorily without meaningful intercultural interaction' (Leask & Carroll, 2011, p. 655).

Internationalisation is often a key driver of and motivation for the growth of EMI (Hultgren, 2014b; Macaro, Curle et al., 2018; Macaro et al., 2019a). In many ways, the use of English can be considered a 'symbol' of internationalisation of HE (Duong & Chua, 2016). For example, Ha (2013) claims that '[t]he policies and practices of the internationalisation of HE in global contexts often assume the importance of English in the production, circulation, and dissemination of academic knowledge' (p. 160). While the motivations for adopting EMI are various (see sections on *Perceived benefits of EMI* and *Variation of EM implementation in higher education*), the different facets of internationalisation, described next, have played an undeniable hand in shaping policies and pedagogies that favour EMI (Singh, 2011). At the same time, it is worth noting that the relationship between EMI and internationalisation is complex, as EMI is simultaneously a driver, reaction and outcome of institutions' approaches to internationalisation. Debates also remain around the degree to which this relationship results in

Figure 3: Facts of internationalisation relevant to EMI
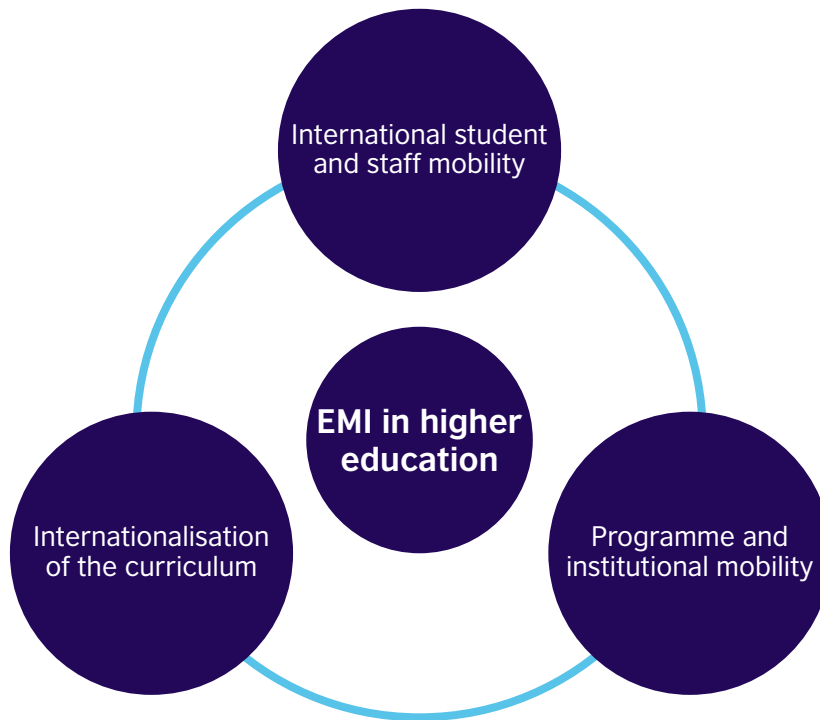
commodification, commercialisation and 'westernisation' of HE (Altbach & Knight, 2007; Knight, 2008). For example, critical arguments have been made that internationalisation prioritises Western knowledge and the English language at the expense of local cultures and languages (Doiz, Lasagabaster & Sierra, 2012) (see *Growth of EMI in higher education*). Similarly, it remains unclear the degree to which English contributes to 'meaningful intercultural interactions' (p. 655) and learning experiences, as described by Leask and Carroll (2011) as a core goal of internationalisation.

In relation to EMI, we focus next on three key considerations in the internationalisation of HE:

1. international student and staff mobility

2. programme and institutional mobility

3. internationalisation of the curriculum.

As demonstrated in Figure 3, these issues cannot be viewed as separate or parallel issues, but instead as intertwining factors impacting collectively upon the global HE sector.

International student and staff mobility

Perhaps the most obvious form of internationalisation is the recruitment and mobility of international students and staff. In terms of international students, numbers have doubled since the year 2000 to over four million students studying across borders (UNESCO, 2018). While receiving countries were initially concentrated towards 'native' English-speaking countries in the 'global North' (USA, Canada, UK, Australia, etc.), the last decade has seen diversification of international students' destination choice around the world (UNESCO, 2018). Many traditional 'sending' countries have now become 'receiving' countries through their own recruitment of international students (Barnett, Lee, Jiang & Park, 2016). As outlined by Kondakci, Bedenlier and Zawacki-Richter (2018), this has led to 'regional hubs', such as South Africa, Turkey and Singapore, which increasingly recruit large numbers of international students from neighbouring countries within their geographic region, with students often motivated by visa availabilities, costs, smaller geographic distance and lesser cultural distance. Similarly, international student migration between countries located in the 'global South' has become more commonplace in the recent decade (UNESCO, 2018). Increasing levels of cultural and linguistic diversity present in many HEIs have had profound impacts on the ways university programmes are marketed, developed and taught (Altbach & Knight, 2007). One outcome is a rising reliance on English as a lingua franca and increased provisions for EMI (Spolsky, 2004; Galloway & Rose, 2015) described further in *Perceived benefits of EMI*).

HE also has a long and complicated history of valuing academic staff mobility (Taylor, Hoyler & Evans, 2008), although globalisation over the last few decades has made academic mobility increasingly commonplace (Bauder, 2015; Børing, Flanagan, Gagliardi, Kaloudis & Karakasidou, 2015). Data regarding academic staff mobility is less readily available than that of international students and often produced by individual nation states (often 'native' English-speaking). For example, one in five international staff in the UK originates from abroad (HESA, 2020) and the USA hosts over 89,000 international scholars (IIE, 2019). In recent decades, university ranking systems have increasingly included international staff numbers in their metrics (see, for example, *Times Higher Education*, 2020), which has led to the increased value of international staff around the world. This has led some countries, such as China (Rose et al., 2020) and Japan (Aizawa & Rose, 2019; Galloway et al., 2020), to explicitly offer

funding or other incentives for universities based on their proportion of international staff. In other cases, international strategies or policies have supported the transfer of academic qualifications across geographic borders, including the EU's Bologna Agreement (Saarinen & Nikula, 2012) or the African Union Strategy for Harmonization of Higher Education Programmes (AU-HEP) (Knight, 2017), supporting provisions for academic staff mobility.

Programme and institutional mobility

A second aspect of the internationalisation of HE is the rising prevalence of TNE, whereby HE degrees are provided to students based in a different country than their awarding institution (McBurnie & Ziguras, 2007). One example of TNE is international branch campuses, in which universities operate an 'educational facility that has its own premises ... in a country different to that of its parent institution' (Wilkins & Huisman, 2011, p. 301). A second example of TNE is that of international (often online) distance education, where students study in their own country of residence at a distance from a university based abroad (Mittelmeier et al., 2020). For instance, the University of South Africa is an institution that teaches fully using distance learning, reaching over 29,000 international students based outside of South Africa in 90 countries around the world, mostly taught using English (Mittelmeier et al., 2020).

The impacts of TNE on HE are wide, although data is not always readily available to document their scale. In 2017, however, C-BERT compiled a list of over 300 branch campuses around the world in current operation. While data on the extent to which these campuses offer EMI programmes is not systematically collected, it is worth noting that 189 of these branch campuses (60.7 per cent) were linked to universities originally based in predominantly English-speaking countries, operating in countries where English was not the dominant language (C-BERT, 2017). Regional data also demonstrates a telling story. For example, over 650,000 international students in 2018 studied through TNE at a British university using English while based outside the UK (HESA, 2019). As such, TNE demonstrates the changing dynamics that have had profound impacts on HE management and strategy (Wihlborg & Robson, 2018), contributing to rising use of English on transnational campuses. Similarly, this highlights that EMI is not simply a 'pull factor' from branch campus hosting countries, but also a 'push' factor exported by English-speaking countries.

Internationalisation of the curriculum

The internationalisation of HE reaches beyond student and programme mobility, as international and intercultural dimensions in HE also impact upon adopted pedagogies and curricula (De Wit, 2017). In this regard, curriculum internationalisation is defined by Leask (2009) as:

The incorporation of an international and intercultural dimension into the content of the curriculum as well as the teaching and learning processes and support services of a program of study (p. 209).

Many HE institutions have placed growing importance on intercultural perspectives in their curricula and pedagogies (Bhambra, Nisancioglu & Gebrial, 2018; Leask, 2015; Leask & Carroll, 2011). This focus is in recognition that such perspectives can promote intercultural learning and competencies (Dunne, 2011), as well as supporting ethical engagement with diverse perspectives in the classroom (Lomer & Anthony-Okeke, 2019).

Within this narrative, EMI adoption has increasingly been seen as a tool for internationalising curriculum provisions for home students (Dafouz, 2014b). For example, one driving factor for EMI is supporting the recruitment of international students (Galloway et al., 2017), who are in turn assumed to provide increased opportunities for intercultural exchange for home students (Leask, 2009). Similarly, it may be considered that EMI provides access to a wider variety of learning materials from around the world (Liu, 2017; Montgomery, 2013; see *Perceived benefits of EMI*), and is thus perceived to strengthen the international perspective that can be incorporated within the curriculum (Mittelmeier et al., 2019).

However, there are cautions that the relationship between English and curriculum internationalisation is oversimplified (Baker, 2016) and that more purposeful pedagogic reflections are needed to support authentic intercultural learning (Bodycott, Mak & Ramburuth, 2014). After all, one challenge facing many institutions is understanding how to offer 'pedagogically responsive and culturally appropriate curricula to a student population which is increasingly massified and diversified' (Gu & Schweisfurth, 2011, p. 614), irrespective of the language of teaching.

Taken together, the context of internationalisation in HE underpins many of the ways that EMI policies are implemented. Within such internationalised spaces, a number of benefits are considered and assumed by HE sectors, institutions and individuals, which we draw attention to in the next section.

5

Perceived benefits of EMI

Main takeaways

- Adoption of EMI is influenced by a number of perceived beneficial factors at the institutional, individual and country levels.

- Commonly perceived benefits include increasing international student revenue, increasing institutional rankings, developing students' English competencies, developing students' employability and providing access to teaching materials.

The reasons for adopting EMI in courses and programmes are complex and driven by a number of factors for nations, institutions and individuals (Hultgren et al., 2015), as summarised in Figure 4. Some of these relate to institutional reputation and revenue stream, such as increased international student recruitment or institutional rankings. Others are focused more on the curriculum and student outcomes, including improved student employability or English language competency. Within this category, there is a focus on increasing access to teaching materials in English, particularly as the majority of scholarly publication or curriculum materials are printed in English (Liu, 2017; Montgomery, 2013).

Figure 4: Factors impacting EMI adoption in higher education
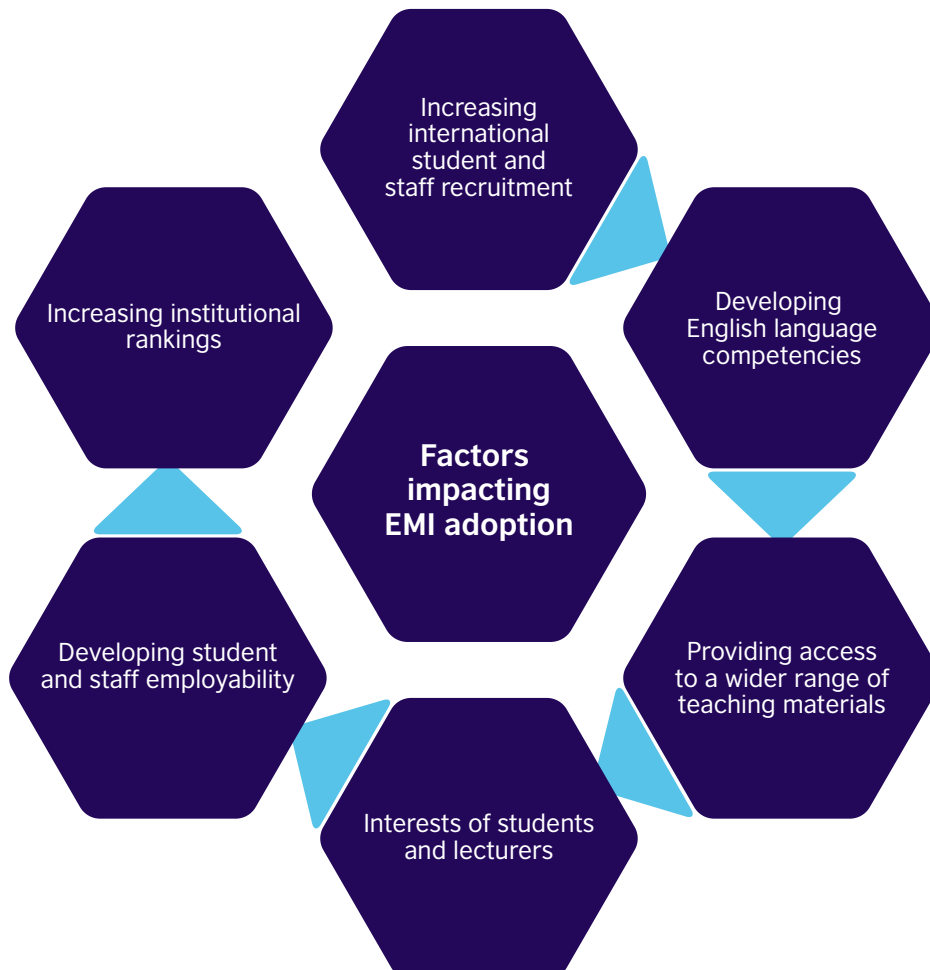
Increasing international student revenue

Austerity measures have had significant impacts on HE systems around the world and the available provisions of national funding vary widely between countries (Johnstone & Marcucci, 2007). Worldwide, neoliberalisation of HE has often resulted in less public funds available for universities and increased reliance on private contributions (Goksu & Goksu, 2015), meaning HE worldwide is often considered an increasingly competitive sector. One such contribution prominently relied upon by HE institutions in many countries is tuition fees (Slaughter & Cantwell, 2012), which are often substantially higher for international students (Choudaha, 2017). Similarly, reliance on international student fees is a strategic position for countries with ageing populations such as Japan (Aizawa & Rose, 2018; Galloway et al., 2020).

In the competitive race for international student tuition revenue, EMI has become a prominent strategy for increasing universities' global attractiveness (Galloway et al., 2017). Within these strategies, assumptions are frequently made by countries or universities that EMI can help institutions 'open their doors to students and academics from around the world' (Dearden, 2018, p. 325). As such, it is often believed that EMI programmes can help attract international students (Jensen & Thogersen, 2011). This assumption has materialised in national policies in some cases, whereby international student recruitment is formally linked with EMI. Two prominent examples are Japan's Global 30 Project and Top Global Universities Project, which have sought to increase international student numbers in the country with an explicit focus on increased EMI provisions (Aizawa & Rose, 2018; Galloway et al., 2020). However, there has been limited research explicitly linking EMI provisions and increased international student enrolment.

Increasing institutional rankings

Around the world, there is increasing reliance on university ranking systems, with more and more universities striving for 'world-class' status (Hazelkorn, 2012; Salmi, 2009). Many university ranking systems incorporate proxies of internationalisation into their metrics. One prominent example is the UK-based *Times Higher Education's* 'Most international universities in the world' ranking, whose algorithm relies upon, among other things, numbers of international students and staff, international co-authorship arrangements and international reputation metrics (*Times Higher Education*, 2020). Similarly, the widely used QS rankings includes a ratio of international students and staff, weighted at ten per cent of its final score (QS Intelligence Unit, 2019).

While also taking into consideration that most university ranking systems tend to favour universities connected to the 'native' English-speaking world (Marginson & van der Wende, 2007), many universities have strategically planned for increased EMI provisions with an eye towards international reputation management (Costa & Coleman, 2013) and recruiting international students and staff. For example, the Ministry of Education in China uses EMI as a performance indicator in national evaluations of universities, whereby universities with at least ten per cent of their courses offered in EMI are rated as 'excellent' (Hu, Li & Lei, 2014). Such discourse is also frequently prevalent in national policies, whereby the push for more EMI is often interlinked with developing global competitiveness of HE sectors (Piller & Cho, 2013). Nonetheless, there are criticisms about the degree to which EMI materialises in improved university rankings and whether 'Englishisation' is a beneficial driver of institutional reputation (Hultgren, 2014a).

Developing English language competencies

English is frequently considered a global language and an essential competency for young people's futures (Spolsky, 2004). This perspective has been similarly expressed by students, who frequently cite English language proficiency as a key reason for choosing to study on an EMI programme (Bozdogan & Karlidag, 2013; Chapple, 2015; Galloway et al., 2017; 2020). As such, one prevalent driving factor behind EMI adoption is the assumption by some countries, universities, or programmes that it contributes to students' English language proficiencies (Dearden, 2018; Rose et al., 2019), despite EMI having no explicit language learning goal (see *Defining EMI*). These beliefs seem underpinned by the ideology that English is best learnt through maximum exposure to the language (i.e. that language exposure leads to second language acquisition) (Mauranen, 2018; Rose & Galloway, 2019), which is debated in current research (see *Success and challenges of studying higher education through English*).

Calls for English language proficiency development can also be tied to national policies, whereby English for academic study has recently been given increased focus. For example, the Hong Kong government's appeal for all citizens to be trilingual (including in English) has supported the widespread use of EMI at universities (Kirkpatrick, 2017). Similarly, national education policies towards English use in primary and secondary school can impact approaches to EMI in HE, as has been the case in many Latin American countries (Corrales et al., 2016; Porto et al., 2016). In many cases, national policies are motivated by a perceived connection between English language proficiencies and economic development (Ali, 2013), linking English language learning with upward mobility (Sah & Li, 2018).

However, these assumptions fail to consider that learning English is not an explicit objective of EMI and that research demonstrates any English learning in such environments is likely incidental or implicit (Pecorari & Malmström, 2018; see *Success and challenges of studying higher education through English*). Similarly, Macaro and Curle et al. (2018) outline that there have been relatively few studies that have empirically measured improvements in English language learning in EMI environments, making it difficult to draw conclusions about its effectiveness, mainly because of their diverse focuses and variability in instruments used (see *Success and Challenges of studying higher education through English*). More recent studies argue that the expectation that students' English proficiency will develop as they study subject knowledge in English seems exaggerated, calling for carefully designed support systems to assist students to gain the most from their EMI studies (Briggs, Dearden & Macaro, 2018; Galloway et al., 2017; Galloway & Ruegg, 2020).

Developing student and staff employability

EMI adoption has also been motivated in part by the role of English language proficiency in graduate employability outcomes. For example, multilingual skills feature prominently on 21st Century skills frameworks (although not specifically mentioning English) (Wolfenden, Buckler, Santos & Mittelmeier, 2018). In this regard, some lecturers in EMI environments have expressed that learning English is an essential skill for their students' employability in a globalised world (Hu et al., 2014). HE students have demonstrated similar beliefs that EMI can prepare them for a successful career (Dearden & Akincioglu, 2016; Galloway et al., 2017; 2020). For example, a wide variety of research has identified that HE students may specifically seek out EMI programmes to develop their competencies in English, gain access to study abroad opportunities, or have better career prospects (Briggs et al., 2018; Galloway et al., 2017, 2020; Rose, McKinley, Xu, & Zhou, 2019). However, it is important to note that a wide variety of more critical perspectives on this topic have also been shared by instructors around

the world (Macaro, Curle et al., 2018), whereby lecturers have expressed concerns about whether EMI supports the necessary skills needed for ongoing employment. Some research has outlined similar sentiments from students as well, such as research in Turkey which found that students felt that it would be easier for them to learn educational content for their futures through their L1 (Kırkgöz 2014; British Council & TEPAV, 2015).

Factors related to employability have also extended to university staff, as research reveals that content lecturers often view teaching on EMI courses as an investment into their own professional growth and development. For example, content lecturers often feel teaching in English can improve their own skills and boost their professional profile in the international scientific community (Dafouz, 2018; Galloway et al., 2017).

These notions have also played out in (inter)national policies; a prime example being the Bologna Agreement, which positioned English language proficiency as key to employability across borders in Europe (Räisänen & Fortanet-Gómez, 2008). Similarly, EMI is also frequently assumed to support the 'social reputation' of graduates, whereby universities teaching in English might be subconsciously deemed as higher quality by global employers (Piller & Cho, 2013; Ellili-Cherif & Alkhateeb, 2015). However, much of the research related to this topic focuses on staff and student perceptions and there is a lack of empirical or longitudinal research to support conclusions on a broad scale.

Increased access to teaching materials

English is often the dominant language of academic research and teaching materials around the world, as more scholarly publications are printed in English than any other language (Liu, 2017; Montgomery, 2013). Scholarly publications in English are also more likely to be cited and made more accessible to a wider audience (Di Bitetti & Ferreras, 2017). This trend is particularly apparent for fields such as the natural sciences, where 90 per cent of articles are published in English (Ammon, 2012). In places such as Scandinavia, these trends have led to increased acceptance and normalisation of English as a necessity in HE, especially in the case of disciplines where English is the default language for disseminating research findings (Werther, Denver, Jensen & Mees, 2014). For these reasons, some universities may turn to EMI as a means to access and utilise a wider range of curriculum materials. For instance, some content lecturers have noted that teaching resources are more readily available in English than in their local language (Basibek, Dolmaci, Cengiz, Burd, Dilek & Kara, 2014; Galloway et al., 2017). For some countries, the lack of available resources in the local language is tied to the use of EMI during colonial rule (Hamid et al., 2013), which limited textbook writing and academic discourses in local languages. At the same time, recent moves towards EMI have been argued to perpetuate this cycle by impacting the available funding and efforts put towards textbook development in local languages (Kedzierski, 2016).

The decision to adopt EMI is clearly complex and contextual. For some countries, institutions or programmers, there may also be additional factors influencing the decision-making process. For example, EMI course availability – i.e. the course is only offered through EMI (Kang & Park, 2005) – or the reputation of a particular lecturer on the EMI programme (Yeh, 2014) may influence whether students enrol. Unsurprisingly, different driving forces and perceived benefits have led to variations in the approaches taken by individual HE institutions or programmes to adopting EMI, which we turn to in the next section of our examination of EMI implementation around the world.

6

Variation of EM implementation in higher education

Main takeaways

- EMI programmes are implemented in a variety of ways, depending on the local context.

- The driving forces behind the introduction of EMI influence how it is carried out in practice.

- Some universities have official EMI policies. In other contexts, EMI arises from the use of English as a lingua franca.

- EMI programmes vary in their provisions for language support and L2 proficiency requirements.

- EMI programmes can be full EMI, partial EMI or bilingual education programmes.

EMI implementation comes in many forms and is influenced by a number of different factors. This section highlights four such factors, summarised in Figure 5.

Figure 5: Factors influencing EMI implementation
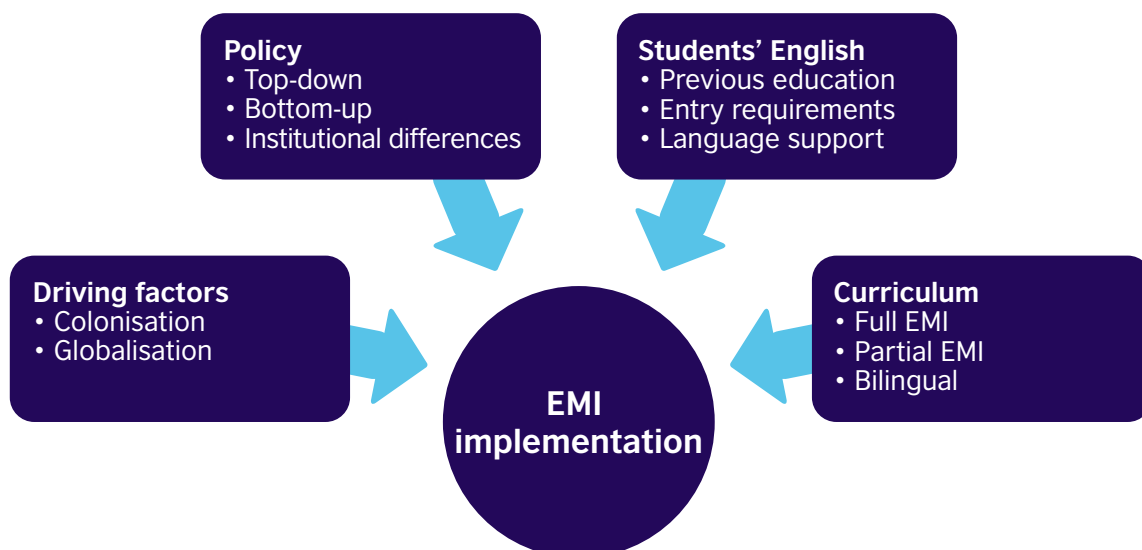
Driving forces: Why introduce EMI?

As noted with respect to the growth in EMI policies, one factor affecting the implementation of EMI is the driving force behind its introduction. There is a long (and often problematic) history of EMI in many post-colonial contexts throughout Asia and Africa (Evans, 2018), where the use of English as a language of learning and teaching was imposed by imperial powers. In jurisdictions such as Hong Kong (e.g. Evans, 2003; 2008a; 2008b; 2011) and Singapore (e.g. Bolton & Botha, 2017), the implementation of EMI is influenced by a colonial past and the complex dynamics of a multilingual society. Similarly, Probyn (2001) states that in South Africa:

> *Language and education are twin threads that run through the struggle against apartheid, intertwined, highly politicised and contested. Thus any discussion about language in education in South Africa should be placed in an historical–political context* (p. 249).

Policy
- Top-down
- Bottom-up
- Institutional differences

Students' English
- Previous education
- Entry requirements
- Language support

Driving factors
- Colonisation
- Globalisation

Curriculum
- Full EMI
- Partial EMI
- Bilingual

EMI implementation

In Malaysia, language policies have oscillated between EMI and L1 medium of instruction (MoI) (e.g. Ali, 2013; Gill, 2006). These dynamics in post-colonial societies reflect the historical legacy of English as a colonial language, its use in daily life, and its prominence as a global language.

While a long tradition of EMI is established in some contexts, EMI has grown in other countries in response to globalisation (see *Growth of EMI in higher education*). In countries such as Japan (e.g. Aizawa & Rose, 2019; Galloway et al., 2020; Rose & McKinley, 2018) and China (e.g. Hu & Lei, 2014; Macaro, Tian & Chu, 2018), EMI is supported by government efforts to internationalise the HE system.

In Europe, the spread of EMI is generally connected to internationalisation policies at that institutional level and, at the (supra-)national level, the Bologna Process, which established the European Higher Education Area (EHEA) and the Erasmus programme, a student mobility scheme (Macaro, 2018; see *Growth of EMI in higher education*).

These policies have contributed to the flow of international students and mutual recognition of qualifications across European countries. Although a purpose of the Erasmus scheme is to promote learning the language of the host country, 'anecdotal evidence would suggest that there has been a gradual shift from attending courses in the language of the host country to attending courses taught through the medium of English' (Macaro, 2018, p. 50). Similarly, Doiz, Lasagabaster and Sierra (2011) note that despite the European Commission's commitment to multilingualism, 'reality indicates that it is English which reigns supreme and has become the main foreign language used as means of instruction at European universities' (p. 345).

While systematic research into the language of instruction on Erasmus exchange programmes is lacking, researchers have suggested that patterns of student and staff mobility have contributed to the growing number of EMI programmes in Europe (Costa & Coleman, 2013). Globalisation and a desire to internationalise the university have influenced EMI implementation in these contexts, where English is used as a lingua franca for activities of teaching and learning in light of increased mobility.

Policy: Who decides on EMI?

Another influence on EMI implementation is the nature of policymaking. In some contexts, EMI university programmes are regulated by official language policies which set standards for language proficiency and classroom language use; in other contexts, EMI implementation appears on an ad hoc basis. Top-down EMI policies may result in mandatory EMI requirements, regardless of teacher or student motivation. For example, a study by Kim, Kweon and Kim (2017) found that undergraduate engineering students at three universities in South Korea opposed the inclusion of mandatory EMI. Although the majority of students in the study preferred L1 MoI to EMI, they were required to take EMI classes according to university policy. These findings suggest that top-down EMI policies are sometimes imposed without considering the preferences of teachers and students, who may not necessarily be motivated to teach or study through EMI (see *General challenges*).

Although EMI is often framed as an alternative to L1 MoI, the introduction of EMI may be necessitated by the presence of international students (Macaro, Curle et al., 2018). Particularly in contexts with relatively high student mobility rates, such as Europe, where English might serve as a lingua franca for communication (Björkman, 2010; 2011; Coleman, 2006; Jenkins, 2013). In English as a lingua franca (ELF) settings, EMI implementation might be driven by both bottom-up factors, such as multilingualism in the classroom, and top-down policies promoting internationalisation. Research on ELF in EMI contexts has suggested that faculties' and students' pragmatic abilities, more than their L2 proficiency levels alone, are important in meaning making (Björkman, 2010; Gundermann, 2014). Research has also indicated that academic staff and students adjust their language choices according to the context and language proficiency of other participants (Söderlundh, 2012, p. 105). As such, EMI implementation in multilingual contexts might reflect the nature of ELF communication (see *Multilingualism in EMI*).

EMI implementation can also vary across universities within a country context. On a local level, university policies and institutional characteristics might influence the implementation of EMI. In Italy, Costa and Coleman (2013) find a geographic divide with more EMI programmes available at HEIs in the north of Italy compared to the south. The authors contribute regional differences in the availability of EMI programmes to socio-economic differences between Italy's northern and southern regions. Similarly, based on the findings of a study that involved semi-structured interviews with stakeholders (n=30) at ten universities, Lin (2019) concludes that the implementation of EME in Taiwan depends on university type: Lin argues that while high-ranked universities tend to introduce EMI programmes in order to attract international students, lower-ranked universities use EMI as 'a promotional strategy for the domestic market' (p. 6). Because the majority of students in this latter type of EMI programme are local Chinese-speaking Taiwanese students, Lin found that the HEIs adopted a more flexible implementation of EMI which involved bilingual teaching and 'a mixture of Chinese and English instruction' (p. 6), such as using English textbooks but conducting lectures in Chinese.

Differences in EMI implementation have also been noted between the public and private sectors (García, Ibáñez, Hesse, Kogan, Sánchez & Filippini, 2019; Macaro & Akincioglu, 2018). Studies have found that EMI programmes are more prevalent at private compared to public HEIs (Costa & Coleman, 2013, in Italy; Dearden, 2014, in a global survey; Islam, 2013, in Bangladesh; Kiliçkaya, 2006, in Turkey). Hamid, Jahan & Islam (2013) note that EMI programmes are prohibited at public HEIs in Bangladesh due to national language in education policies, and they argue that many students are drawn to private HEIs because of the opportunity to study through English, regardless of the quality of instruction. Research at the primary and secondary school level has suggested that educational inequalities are caused by differences in the quality and availability of EMI programmes at private compared to public schools (Manan, Dumanig & David, 2017; Sah & Li, 2018); however, less research has been conducted into differences across public and private sectors at the tertiary level. Differences between EMI programmes at public and private HEIs remain an under-researched area of EMI scholarship.

Students' linguistic preparedness: What level of English?

Students' linguistic preparedness and English proficiency can also influence models of EMI implementation (for discussion of content lecturers' English proficiency, see sections on *'Lecturer-related challenges'* and *'Supporting content lecturers'*). In some contexts, students encounter EMI for the first time at the university level, raising questions about an adjustment period transitioning to EMI (e.g. Macaro et al., 2019b). In other contexts, especially post-colonial contexts, students may have experienced EMI at primary and secondary schools (e.g. Manan et al., 2017; Sah & Li, 2018) before entering university. However, a range of educational challenges are associated with the introduction of EMI at the schooling level. The introduction of EMI in primary schools can impair students' learning and set back educational attainment (Simpson, 2017). For these reasons, the British Council supports 'a mother tongue-based multilingual education approach to basic education' (*ibid*., p. 3). Because the quality of English education may vary across schools, students often enter EMI university programmes with varying levels of English proficiency. For example, Lin and Morrison (2010) found that students entering EMI university programmes in Hong Kong from L1 (Chinese) MoI secondary schools had lower levels of English vocabulary knowledge than students from EMI secondary schools.

Furthermore, EMI programmes vary in terms of entrance requirements and English language support. Some universities require students to attain a certain level of English proficiency before enrolling on EMI programmes. At other universities, English language skills are not a prerequisite for acceptance onto EMI programmes. Similarly, EMI programmes vary in the amount and type of language support offered to students. With respect to provisions for language support, Macaro (2018) has identified four models of EMI implementation which are illustrated in Figure 6 and explained below.

Figure 6: Models of EMI language support (adapted from Macaro, 2018)
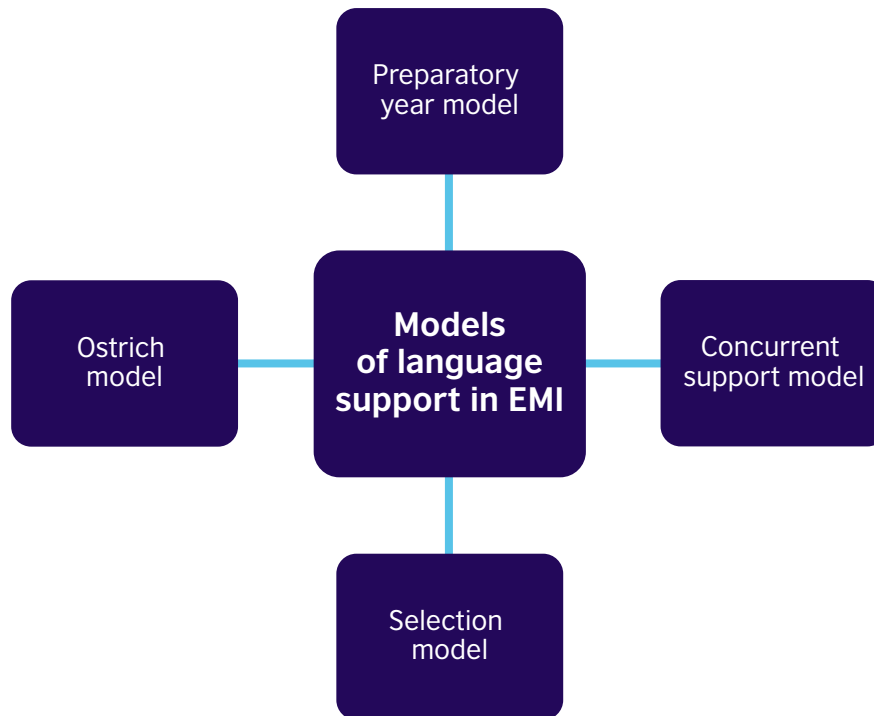
1. Preparatory year model: Most common in Turkey and throughout the Arab Gulf, this model of EMI implementation requires students to complete a one-year intensive English programme before beginning their EMI studies. Students develop their English skills through the intensive preparatory programme before entering EMI classes.

2. Concurrent support model: Rather than provide language support to students before they enrol in EMI classes, this model incorporates language support courses – typically EAP or ESP – into the EMI curriculum. Although these EMI programmes do not necessarily set L2 proficiency requirements for entrance, students take EAP/ESAP courses alongside their EMI classes. This model will be discussed in more detail in *Support systems*. The Bilingual Business Leader programme offered by Rikkyo University is an example of this model (see Figure 10). Although language support courses are incorporated into the curricula for these EMI programmes, the curriculum design differs from (typical) CLIL programmes in that language support is offered as separate classes alongside but distinct from content classes. Content and language instruction are not integrated into the curriculum, as is common in CLIL.

3. Selection model: These EMI programmes require students to meet specific English proficiency standards before they are accepted to the programme. Students typically submit English test scores, and those who do not meet the proficiency criteria are not accepted onto the course or programme. Universities and programmes worldwide require varying levels of English proficiency, if at all, generally ranging from IELTS (International English Language Testing System) 5.0 to 7.0 (B1 to C1 levels on the Common European Framework of Reference (CEFR); Galloway et al., 2017; Rose et al., 2019). Rogier (2012) in the UAE reports an IELTS 5.0 (B1) as the required level of English proficiency to enrol in an EMI programme. In the Chinese and Japanese contexts, the following international and national tests were reported to be used, with varying levels required, in some cases as low as A2:

- Test of English for International Communication (TOEIC)
- Test of English as a Foreign Language (TOEFL)
- IELTS
- Test in Practical English Proficiency (EIKEN)
- College English Test (CET)
- institutional entrance exams (Galloway et al., 2017).

More research is needed to identify the appropriate English proficiency for studying in an EMI programme, as well as the relevance of such tests which may be benchmarked to 'native' English norms.

4. Ostrich model: In these EMI programmes, 'managers and teachers simply bury their heads in the sand and pretend that [language-related] problems … do not exist or will go away if they are ignored' (Macaro, 2018, p. 233). These types of EMI programmes do not offer language support to students and do not set language proficiency requirements for entry. In a study focusing on Chinese HE, some universities were found to have very few regulations to ensure that students had an adequate level of proficiency to study through the medium of English, and some university staff were reportedly unconcerned with students' English proficiency since they assumed that students who elected to enrol in an EMI course were sufficiently proficient (Rose et al., 2019). This model of EMI implementation may result in students with low English abilities mixed in classes with those with good English abilities, and it may exacerbate the language-related challenges of EMI discussed in the next section of this paper.

Each of these models of EMI implementation offers different benefits and drawbacks. The preparatory year model is similar to many pre-sessional courses offered at UK universities in that it offers an opportunity for students with lower levels of English proficiency to improve their language abilities before enrolling on an EMI programme. However, researchers have questioned the effectiveness of a preparatory year in terms of preparing students for EMI study (e.g. British Council & TEPAV, 2015), especially for students leaving secondary school with low levels of English proficiency. This model also adds an additional year to students' undergraduate courses, which could have financial implications in some

contexts. However, a strength of the preparatory year model is that it may address issues of access and equality. Language prerequisites without adequate support from the university might prevent students from low-income or disadvantaged backgrounds from accessing EMI programmes. In turn, this requirement for English prerequisites could perpetuate social divisions around schooling and access to high-quality English education. The preparatory year model allows students who have had limited access to quality English education to participate in EMI programmes.

In contrast, the concurrent model provides ongoing language support to EMI students, which is a recommendation that has been supported by researchers (e.g. Jiang et al., 2019; see *Support systems*). However, the EAP/ESP courses offered in this model might not be sufficient for students with low L2 proficiency, particularly if they are not integrated into the content curriculum, and the lack of entrance criteria could result in students with varying levels of English proficiency in the same class. Students have also reported dissatisfaction with the general content of EAP classes and called for more subject-specific, ESP courses (Galloway et al., 2017; 2020). The selection model has the potential to ensure that students have adequate levels of English proficiency before starting their EMI programmes, although, as noted, more research is needed on appropriate levels of English proficiency and appropriate ways to assess such proficiency for EMI study. It is also important to note that requirements, and methods of assessing proficiency, could also be discipline specific.

In addition to the varied nature of language support provided for EMI students, programmes also differ in the amount of English used for teaching and learning, discussed next.

EMI curriculum: How much EMI?

Although language policies may mandate English-only teaching in some EMI contexts (e.g. Chang, 2019, in Taiwan; Karakas, 2016, in Turkey), EMI is not necessarily always English-only. In fact, EMI implementation varies with respect to *how much and in what format* English is used (or expected to be used) in the course curriculum. In some contexts, language policies promote bilingual (or multilingual) models of EMI implementation, such as in China where EMI programmes are often labelled as Chinese-English bilingual programmes (e.g. Jiang et al., 2019; Rose et al., 2020; see *Multilingualism and EMI*). In their case study at a university in China, Wang and Curdt-Christiansen (2019) argued that the recognition of bilingual education in national and university policies provided institutional legitimacy to multilingual practices. At a bilingual university in Puerto Rico, Mazak and Herbas-Donoso (2014) found that EMI implementation involved the use of English language materials with lectures and discussions in Spanish. This form of bilingual EMI implementation (e.g. in which English texts are used but discussion is in the L1) may address the lack of adequate academic resources available in the L1, a commonly cited reason for adopting EMI (Macaro, Curle et al., 2018; see *Perceived benefits of EMI*), but does not necessarily address the issue of students having insufficient levels of English to access such texts effectively.

In other contexts, a distinction might be drawn between full and partial EMI programmes (Pecorari & Malmström, 2018; Poon, 2013). Partial EMI programmes might be introduced for a number of reasons, including limitations in the number of staff qualified to teach through English, concerns over students' English proficiency levels for full EMI programmes, or a desire to offer students the opportunity to experience EMI at their home university. However, what is meant by partial EMI programmes varies: in Turkey, partial EMI programmes are defined as programmes in which a minimum of 30 per cent of course credits are delivered through EMI, with the remaining courses taught through Turkish (Sahan, 2020). Chou (2018) refers to partial EMI programmes at a Taiwanese university as 'settings in which the course books and examinations are in English, but the translation of concepts and codeswitching in lectures is allowed' (p. 612). In their case study of a university in Japan, Aizawa and Rose (2019) reported that university policy required courses to be labelled according to whether they were English-only, Japanese-only or a mix of both languages. However, neither Chou (2018) nor Aizawa and Rose (2019) specify a breakdown in terms of expected L1 and L2 use in partial EMI programmes. As such, university programmes might vary in the amount of EMI offered, and the implementation of EMI might involve bilingual instruction (see *Multilingualism in EMI*).

Overall, EMI implementation is not uniform across countries or within the same country and it depends on a variety of factors, including stakeholders' motivations, official language policy and local dynamics. The following section addresses the question of how successful EMI is in terms of teaching and learning.

7

Success and challenges of studying higher education through English

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Main takeaways

- English language proficiency and affective dimensions such as students' self-perceived success and self-belief play a role in succeeding in EM higher education.

- Lecturers and students face similar challenges.

  » English language proficiency is often a challenge for students and lecturers (often leading to the simplification of content).

  » Not having the agency to choose whether or not to teach/learn through English is a challenge.

</div>

Is studying higher education through English 'successful'?

By definition, EMI does not always have a language learning goal, yet it is often associated with improved English proficiency. Therefore, in some cases, improved English proficiency may be considered to be a benchmark of 'successful' EMI. As noted, improved English proficiency is also often a perceived benefit, as well as being one of the reasons students enrol in EMI courses (see *Perceived benefits of EMI*). It is recognised, however, that the Matthew effect might be at work: the students most likely to succeed in EMI courses are those who enter the course already highly proficient in English. Nevertheless, the notion of whether or not HE through English is 'successful'

has recently gained research attention from scholars. Rose et al. (2019) surveyed (*n*=146) and interviewed (*n*=7) students studying business through English in Japan. Predictors of EMI success (i.e. business exam scores) were explored. Results showed English language proficiency and academic English skill to be statistically significant predictors of success. Xie & Curle (2020) expanded on this study by collecting data in China (questionnaires, n=100; interviews n=29). An additional dimension of 'perceived success' was explored as a predictor. Results echoed Rose et al.'s (2019) findings that business English proficiency statistically significantly predicted success. Thus, students that are less proficient (i.e. below B1 level) in English (academic or general) require linguistic support to succeed in their studies through English. *Perceived success* was also found to predict *actual success*, highlighting a need to boost students' *perceptions* of their own ability to succeed in their EM studies. This affective element was further explored by Thompson et al. (2019). A questionnaire of students' self-beliefs (*n*=139) and follow-up interviews (*n*=7) revealed self-efficacy to be a direct predictor of EMI success. Thus, there is a need for universities to provide linguistic support and efficacy development (such as improved self-belief) opportunities for students. The need for linguistic support was further emphasised in Thompson et al.'s (2019) study as English language ability and preparatory performance were again shown to predict success. It should be noted, however, that these papers relate only to China and Japan, and more research is needed elsewhere.

Authors of these studies on success recognised the reductionist approach taken to the operationalisation of 'success' (i.e. academic course grade score). Qualitative data revealed that students' perceptions of success were complex. One's EM studies could be considered to be 'successful' if one:

- acquires content knowledge
- improves English proficiency
- knows how to apply and transform knowledge
- develops a new way of thinking (Xie & Curle, 2020)
- gets a good final grade, comprehends lectures
- see gains in long-term career advancement (Rose et al., 2019).

To achieve this 'success', immediate challenges encountered in the day-to-day implementation of EM teaching and learning need to be faced and overcome, which we explore next with an examination of overall perceived challenges, followed by those related specifically to content lecturers using EM and students.

What perceived challenges arise when studying through English in higher education?

General challenges

Numerous challenges arise when implementing EMI programmes at universities across the globe (Tsuneyoshi, 2005; Hellekjaer, 2010; Wilkinson, 2011). Attitudes research, regardless of country context, has revealed that all stakeholders within the entire university system face challenges – from students (both local and international) to lecturers to administrative staff. These challenges are represented clearly in Galloway et al.'s study (2017: p. 24) (Figure 7).

These challenges are also represented in studies such as Wächter & Maiworm (2014), Tange (2012) and Doiz, Lasagabaster and Sierra (2014).

Overall, the same themes are evident across the research literature.

Figure 7: The typology of challenges to implementing EMI for staff and students
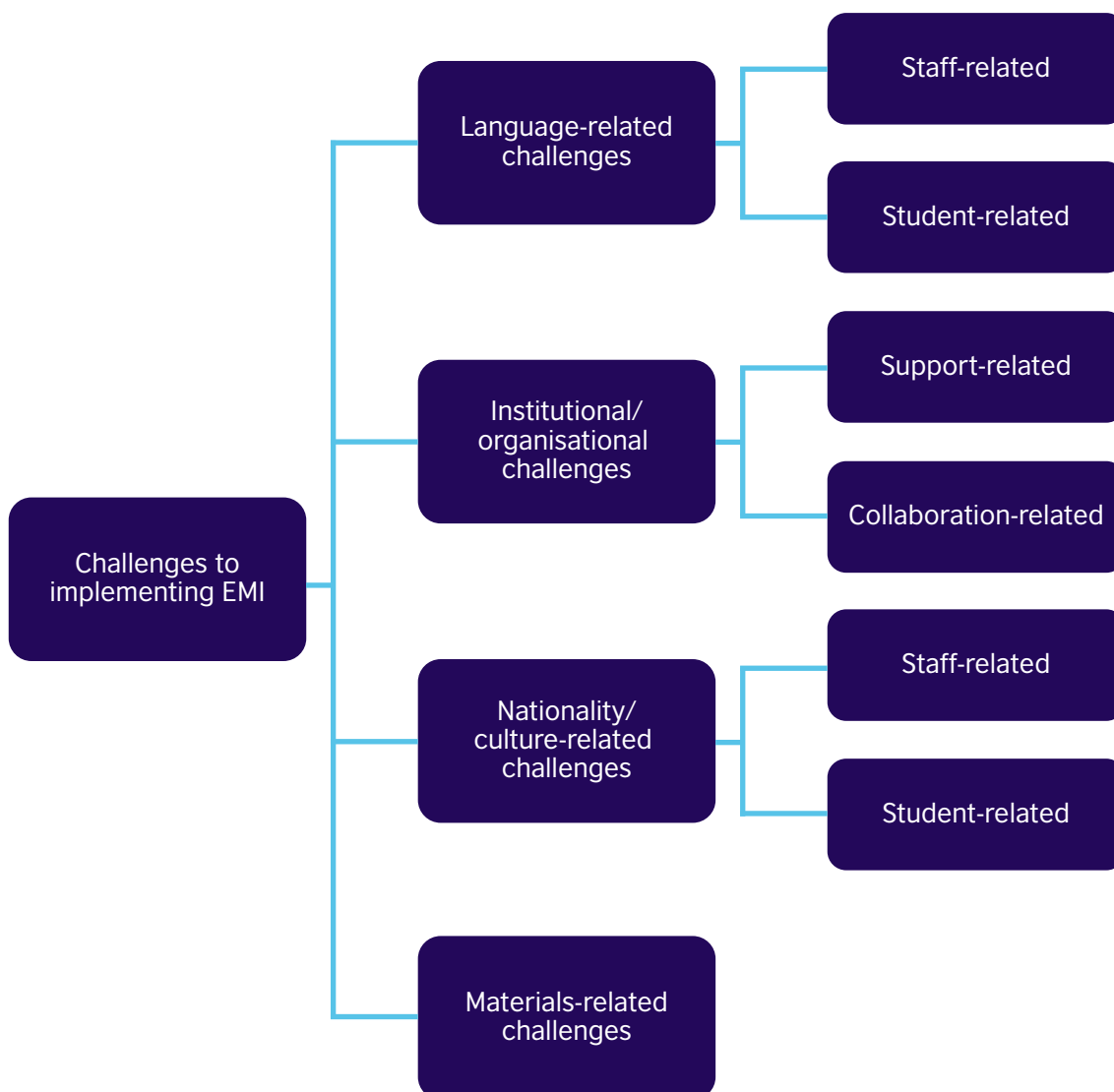
Linguistic challenges

- Language-related challenges exist for both students and staff (lecturers and administrative; Jiang et al., 2019).

- There is a lack of a common language between staff and students (particularly in the case of international staff/students interacting; Kuteeva, 2020; Song, 2019).

- Lecturers do not see themselves as language instructors, and therefore are not giving linguistic feedback to students (Macaro et al., 2016).

- Lecturers have reported a limited ability to use humour in class, which restricts the building of rapport with students (Tsui, 2017).

Implementation challenges

- There is an increased workload for all stakeholders (Babicheva & Lee, 2018): preparing for lectures taught through English takes longer, and studying through English also takes longer due to, for example, needing to look up unfamiliar words in the dictionary (see Nikula, Dafouz, Moore & Smit, 2016; Henriksen, Holmen, Kling, Holmen & Kling, 2018).

- Universities have reported challenges in hiring staff to teach through English (Hu, 2009; Tsuneyoshi, 2005).

- Administrative staff have reported linguistic barriers when communicating with international staff and students (Çankaya, 2017).

- There is a lack of pedagogical guidelines for lecturers when switching the medium of instruction (Dearden, 2014).

- The simplification of academic content (Beckett & Li, 2012).

Content lecturer-related challenges

Academic or teaching staff often face challenges when teaching through the medium of English. In Dearden's (2014) survey of 55 countries on their provision of EMI, 83 per cent of countries reported difficulty recruiting staff who could teach their academic subject through English. Lecturers themselves reported the reasons they were teaching through English was because:

- they had been nominated

- they had studied abroad

- they were proficient English speakers

- they had simply volunteered.

More recently, studies report that the selection of lecturers to teach EMI courses is often based on a set of criteria including some indication of English proficiency. In most contexts, a 'high-level' English proficiency is required (Rose et al., 2019; Macaro, Curle et al., 2018); however, it is not necessarily specified what this high-level proficiency means in terms of, for example, standardised tests. Airey (2011) refers to a recommended threshold level of C1 in order to make a student-centred lecturing style possible. A recent survey of 70 European universities in Spain, Austria, Italy, Sweden, the Netherlands, Germany and France found that more than three-quarters of them required a particular level of English proficiency from their faculty. The determined threshold level varied between B2 (44 per cent), C1 (43 per cent) and C2 (13 per cent) (O'Dowd, 2018). In general, there seems to be a consensus that faculty need a higher than intermediate (B2) proficiency to lecture in English; however, there is little to no research evidence to support this minimum level. Research is needed to determine an approximate benchmark that considers the language used to convey meaning in different subject areas. For example, previous studies suggest that in disciplines where mathematical codes and formulae are frequently used, language is perceived to play a lesser role in teaching (Dearden & Macaro 2016; Macaro et al., 2016; Macaro, Curle et al., 2018).

Numerous studies have found English proficiency to be a challenge for content lecturers. Academic staff in Denmark felt insecure when giving their classes in English and found themselves searching for words, technical terms in English, during their lectures (Werther et al., 2014). A study in Korea found that about half of the teacher participants evaluated their own English proficiency as a hindrance to teach smoothly through English (Kim, Kim & Kweon, 2018). Research also suggests that faculty often feel the need to improve their English proficiency to carry out specific tasks when teaching in English, for example to communicate more spontaneously, manage classroom situations and explain subject-specific concepts more clearly (Macaro, Jimènez-Muñoz & Lasagabaster, 2019). Studies in Denmark (Tange, 2012, 2014; Werther et al., 2014) have also highlighted discontent by faculty to teach through English. They expressed a sense of obligation to teach through English when requested, even though they felt they were insufficiently proficient. Vinke et al. (1998) argue that this lack of proficiency, or perceived lack of proficiency, leads to increased workload for both lecturers and students, as well as an overall fall in the quality of education.

Kling (2015) reports that teaching through a second language does not affect lecturer identity, authority or expertise in the classroom. Lecturers with more experience teaching through English have developed strategies to overcome any linguistic limitations. Airey and Linder (2006) note a shift from an English-only policy to a more inclusive agenda, using the instructors' and students' L1 more freely. This draws on L1 competencies, rather than relying solely on English language competencies, which may be limited. It should be noted, however, that the underlying assumption is that students and content lecturers share the same L1, which is not necessarily always the case when international students are present.

Student critique of content lecturers' English-language proficiency is also prevalent in the literature. Students often find it difficult to understand and feel that the lack of appropriate English proficiency might result in incorrect language learning (Macaro, Curle et al., 2018; Chang, Kim & Lee, 2017; Aizawa & Rose, 2019). In Klaassen's study (2003) questionnaires revealed that 62 per cent of 500 students stated that their content lecturers' English proficiency was 'inadequate' (p. 133). Nevertheless, most content lecturers at the same university felt that their proficiency was 'sufficient' to teach their academic subject through English (p. 134). Research has shown

a lack of local content lecturers able and willing to fill the demand for content lecturers proficient in English (Brown, 2017; Hu et al., 2016). Björkman (2010) argues that even if content lecturers are highly proficient in English, this does not necessarily mean that they are skilled at giving good lectures. In the UK for example, academics are now encouraged to do a postgraduate certificate in academic practice that contains an element of how to teach a diverse, international cohort. Hellekjaer & Wilkinson (2001) further this argument of content lecturer development to include that content lecturers should have personal attributes such as open-mindedness (to try new things) and be responsive to students' needs. It would therefore appear that EM higher education requires language proficiency, higher education pedagogical knowledge and a positive attitude.

A further language-related challenge for content lecturers is dealing with issues of language during their classes. Many content lecturers recognise the need for a language focus in EMI; however, they acknowledge this as part of their role to different degrees (see *Perceived benefits of EMI* and *L1 use and EMI pedagogy: Is professional development the way forward?*). Research found that faculty aimed to develop academic biliteracy by providing terms in both English and L1 which they did not consider language teaching (Dafouz, 2018; Block & Moncada-Comas, 2019). Other research highlights that academic staff typically position themselves as content experts aiming to develop content knowledge and avoid acting like English language instructors by not commenting on students' English (Block & Moncada-Comas, 2019; Moncada-Comas & Block, 2019). Often the underlying reasons are that they want to focus on communication and intelligibility and have limited understanding of language teaching and learning (Block & Moncada-Comas, 2019; Macaro et al., 2019b). Studies also revealed that EMI classes were often more student-centred and interactive mainly as content lecturers wanted to ensure that content matters are delivered appropriately and understood by students (Dafouz & Camacho-Miñano, 2016; Dafouz, 2018). There is, however, little research into the interaction and the variety of English language used in EMI classes (see *Variation of EM implementation in higher education*). This kind of analysis could shed light on the interaction types that might facilitate student engagement and learning.

Finally, there is ample research to confirm that there are many challenges in teaching classes through EM that are not language related. Academic staff in EM classes often face a multilingual and multicultural student body. The heterogeneity of EM classrooms creates challenges to instructors (Henriksen, Holmen & Kling, 2019), as will be covered in the next section: *Student challenges*. Content lecturers using EMI need to be prepared to teach student groups with diverse cultural backgrounds, which includes diverse expectations of an academic context as students might have little understanding of the local education system. This has implications for the professional development of content lecturers using EMI (see *Support systems*).

Student challenges

Students have also reported challenges when studying through the medium of English in HE: from issues with spontaneous speech production (Suzuki, Harada, Eguchi, Kudo & Moriya, 2017) to experiencing difficulties understanding lecturers' accents (Evans & Morrison, 2011). Austrian university students in Tatzl's (2011) study reported increased workload and the covering of less content when the MoI switched to English.

The most frequently cited challenge, however, is that of a lack of English proficiency (students themselves/ their classmates, and their lecturers) (Airey, 2011; Airey & Linder, 2006; Tsuneyoshi, 2005; Wilkinson & Yasuda, 2013). A lack of English proficiency has been reported to have detrimental effects on student learning, including a lack of lecture/material comprehension, ultimately leading to a lack of content understanding and acquisition. In some cases, this results in students falling behind in their studies, and eventually dropping out (Doiz, Lasagabaster & Sierra, 2013).

As discussed earlier (see *Perceived benefits of EMI*), although various EMI policies advocate and claim students' English proficiency improves due to long-term exposure to English in these programmes, little evidence for this yet exists. In a rare longitudinal study, Pessoa, Miller and Kaufer (2014) examined the challenges faced by high school students when transitioning into an EM college in Qatar. Eighty-six students' literacy skills were tracked, each producing seven texts over a four-year period. Results showed

that students had difficulties with reading comprehension due to a lack of background knowledge, vocabulary knowledge and reading stamina. Students also struggled with academic writing. These findings are key, as, more often than not, assessment at the HE level is based on essay writing, and classroom activity/content revolves around understanding written English material. These two challenges could therefore risk students' chances of success in completing their higher education. Nevertheless, Pessoa et al. (2014) note that once students were taught strategies, skills improved. This highlights the necessity of practical support for students to ensure successful learning.

Evans and Morrison (2018) explored the difference in level of challenges faced by first-year EMI university students in Hong Kong according to their high school MoI. Eight hundred and twenty-eight first-year students (427 EMI, 337 CMI) were surveyed and 40 students interviewed (23 EMI, 17 CMI). Results showed that secondary school MoI was a 'crucial determinant' of students adjusting to their university studies. CMI students were less proficient in English and therefore struggled to perform well both linguistically and academically. Taguchi and Naguma (2006) also reported that domestic Japanese students felt unprepared for the linguistic demands imposed by EMI, due to their lack of preparation at the high school level. Students reported particular challenges in relation to lengthy lectures in which they were required to comprehend complex material covered at pace, as well as the volume of reading assigned to them after the class. An initial analysis of students' needs for this EMI programme might mitigate some of these issues.

Challenges students report are very much context dependent. For example, in Northern Europe, on the whole, studies revealed that students seemed to be able to cope with EMI, even though they might need more time to study through English, be less communicative in class and often have comprehension difficulties (Airey, Lauridsen, Räsänen, Salö & Schwach, 2017). In other contexts, such as those where EMI is related to a lack of materials in L1 such as in the UAE, three-quarters of students stated that they had no difficulties studying and taking exams in English (Belhiah & Elhami, 2015). Airey & Linder's (2006) qualitative study revealed

that 22 EMI undergraduate physics students at two Swedish universities compensated for comprehension difficulty by putting in extra effort to read relevant course material either before or after lectures, providing further evidence of the increased workload faced by students due to the implementation of EM teaching and learning. However, these challenges may be highly institutionally, context dependent. Shaw and McMillion (2008) found that Swedish students in their study were 'near native' speakers of English, and therefore faced very few challenges when studying complex academic content through English. This illustrates a need to be highly sensitive to not only the macro context (e.g. country level) in which EM programmes are being delivered, but also the meso- (institute level) as well as micro-level contexts (classroom level).

Research points to several perceived and real challenges for students when EMI courses are introduced in HE (Macaro, Curle et al., 2018); however, there is little research into the specific challenges students face when studying through English, taking exams and participating in EMI classes. A larger-scale study in the Chinese context (Rose et al., 2019) revealed that the specific challenges that students reported were mostly associated with productive skills of speaking and writing, in particular:

- the use of appropriate academic style when writing
- working out the meaning of difficult words when reading
- writing a bibliography/references section
- writing the body of an assignment
- communicating ideas confidently.

Receptive skills they did not find difficult included:

- understanding questions
- using visual aids (e.g. PowerPoint)
- identifying supporting ideas and examples when reading.

In terms of self-efficacy, students felt less confident that they could achieve a good grade in EMI courses than in courses given in Chinese. A small-scale study in the Turkish HE context (Soruc and Griffith, 2018) identified four main categories of challenges with a list of specific challenges in each category:

1. difficulties with speaking and listening
2. difficulties related to the teacher/class
3. difficulties related to vocabulary
4. affective/cognitive difficulties.

Challenges are related to different aspects of language, e.g. vocabulary and familiarity with different varieties (standard, non-standard, discipline-specific) of English; others are related to communication and language skills, e.g. expressing their own ideas, answering questions and interacting with other students. Research also points to affective challenges, such as feeling bored, embarrassed and less confident (Soruc and Griffith, 2018; Thompson et al., 2019).

An additional complexity to take into consideration is that of the make-up of an EM class. In Chapple's (2015) study, international students have not only also expressed dissatisfaction with the local lecturers' level of English proficiency, but also the local students'. This raises questions as to the quality of education international students may be receiving on EMI programmes compared to their home countries. Of course, the debate over English proficiency is a controversial one and relates to how we define a competent EMI instructor, as well as how we set English proficiency entrance requirements and also how we assess students (see *Students' linguistic preparedness: What level of English?*). As the intention of EMI policies is often to attract international staff and students to their HEIs (see *Driving forces: Why introduce EMI?*), this changes the dynamic of the teaching and learning environment. International students studying in EM contexts outside of their home countries have also reported discontent with their learning experience. In Galloway et al.'s study (2017), a Japanese student reported that because the content lecturer was not perceived to be proficient in English, he used a lot of Japanese while teaching (see *Content lecturer related challenges*). This led to the withdrawal of numerous international students from that EMI class. We now turn to the topic of multilingualism in the EMI classroom.

8

Multilingualism in EMI

Englishisation or embracing multilingualism?

Some scholars have argued that the spread of EMI has contributed to the *Englishisation* of HE (Dimova, Hultgren & Jensen, 2015; Kirkpatrick, 2011; Lin, 2019). Saarinen and Nikula (2012) have found that English is euphemised as a 'foreign language' (p. 135) in internationalisation policies, thereby making other foreign languages invisible. Scholars have argued that the Englishisation of HE through the expansion of EMI may result in domain loss to the local language (Hultgren, 2013), and research has found that students enrolled in EM university programmes felt distant from their L1 culture (Kırkgöz, 2009). Galloway et al. (2017) found cultural issues related to Westernisation of the curricula in EMI programmes in China and Japan. Such findings have raised concerns of linguistic imperialism (Phillipson, 1992, 2008) alongside the spread of English in HE. Although English has become synonymous with the internationalisation of HE (see *Growth of EMI in higher education*), Englishisation is not inevitable: scholars have argued that EMI can be implemented in such a way as to embrace the multilingual and multicultural resources of the international student body (Dafouz, 2014a; Dafouz & Smit, 2016; 2020).

As such, scholars have investigated the use of L1 and languages other than English in EMI settings. Studies on L1 use in EMI universities have tended to examine stakeholders' attitudes toward or practices of L1 use in EMI classrooms. These studies have approached L1 use from a variety of perspectives, employing terms such as codeswitching and translanguaging to understand the phenomenon. Codeswitching refers to the use of separate and multiple linguistic codes (or languages). Because codeswitching has often described 'switches' between languages in negative terms – such as 'an unfortunate lapse from the prescribed language of instruction' (Pecorari & Malmström, 2018, p. 499) due to deficits in language knowledge – some scholars have preferred the term translanguaging, a concept which describes the fluidity of language use as a natural bilingual or multilingual practice (e.g. Creese & Blackledge, 2015; García, 2009; García & Li Wei, 2014). For the purposes of this literature review, the terms codeswitching and translanguaging are used interchangeably, and 'L1 use' is preferred as the more 'value-neutral term' (Macaro, Tian & Chu, 2018, p. 3). Although L1 use does not encompass multilingual – as opposed to bilingual – practices, it reflects the reality of language use found in much of the empirical research on EMI, as will be demonstrated in the following sub-sections. Unless otherwise stated, references to the L1 in this section refer to the local language, which in many research contexts is the L1 of the majority of students and teachers.

The following sections provide a summary of research on L1 use in EMI settings, beginning with an overview of research on faculty's and students' attitudes towards L1 use in EMI contexts. Next, L1 use is explored through an overview of research which has employed classroom observation techniques to analyse language use.

Do lecturers and students support L1 use?

> ### Main takeaways
> - Research on attitudes toward L1 use in EMI settings suggests that content lecturers and students perceive the L1 as a useful resource for content comprehension.
> - Research suggests that content lecturers using EMI oppose L1 use because it would exclude international students and violate official policy.

Studies have examined content lecturers' and students' attitudes and perceptions of L1 use in EMI university contexts using semi-structured interviews (e.g. Karakas, 2016; Kuteeva, 2020), questionnaires (e.g. Alkhudair, 2019; Kim et al., 2017) or both (e.g. Galloway et al., 2020; Rose and Galloway, 2019). In many cases, this research is limited to a single university case study (e.g. Qiu & Fang, 2019), or includes a small sample of HEI contexts to draw comparisons (e.g. Roothooft, 2019). This section provides a brief summary of university staff and students' attitudes to L1 use in EMI.

Research across university contexts has indicated that content lecturers using EMI and students generally view the L1 as a useful resource to facilitate content teaching and learning (e.g. Adamson & Coulson, 2015, in Japan; Alkhudair, 2019, in Saudi Arabia; Kim et al., 2017, in South Korea; Qiu & Fang, 2019, in China). The findings suggest that content lecturers and students believe that the L1 can help clarify explanations of academic content in English. These studies join research conducted in foreign language classrooms, where L2 learning is the primary aim, to suggest that L1 use may be beneficial for teaching and learning (e.g. Makalela, 2015, in South Africa; Wang, 2019, in China).

Some research on L1 use in EMI universities has suggested that content lecturers and students codeswitch in order to overcome low or insufficient levels of L2 proficiency (Hahl, Järvinen & Juuti, 2016; Kim et al., 2017; Lei & Hu, 2014). In a large-scale survey conducted with engineering students studying through EMI (n=523) in South Korea, Kim et al. (2017) found that students were overwhelmingly positive about the use of L1 to facilitate learning (90 per cent) and explain difficult concepts (85 per cent). The study also found that students reported low levels of English proficiency, and the researchers concluded that 'students' learning of content and ultimately the quality of education have suffered' because of the introduction of EMI (Kim et al., 2017, p. 143). Thus, in addition to demonstrating that faculty and students held positive attitudes toward L1 use, the study also found that English was seen as a potential obstacle to content learning.

Although the studies described above have suggested that content lecturers and students hold positive attitudes toward L1 use, the results of other studies have indicated that this is not always the case. Content lecturers and students have been found to oppose the use of L1 (or languages other than English) in EMI classes primarily for two reasons:

1. using the local language would be unfair to international students

2. official policy indicates that classes should be taught through English.

Several studies have found that content lecturers are reluctant to use the L1 when international students are present (e.g. Karakas, 2016; Roothooft, 2019). For example, content lecturers in Turkey reported that L1 use increased content comprehensibility for local students but stated that they avoided L1 use when international students were enrolled in the course (Karakas, 2016). Even when international students were not present, some of the content lecturers in Karakas' study opposed L1 use because it violated official university policy. Although the study involved only a small sample of content lecturers using EMI (n=13), its findings suggest that L1 use might be divisive in EMI contexts, particularly when international students do not speak the local language.

Similarly, Roothooft (2019) found that content lecturers using EMI in Spain avoided using the L1 when international students were present and because they perceived EMI policy to mandate English-only instruction. Roothooft compared the beliefs of content lecturers using EMI in STEM subjects (n=36) with those lecturing in the humanities (n=23). The results indicated that content lecturers in both disciplines prioritised content teaching over language instruction (see also Airey, 2012; Block & Moncada-Comas, 2019). Although lecturers in the humanities were generally less open to L1 use than lecturers in STEM subjects, attitudes toward L1 use were determined mainly by the presence of international students and English-only policies at the HEI: about half of the lecturers (47 per cent) stated that they did not allow L1 use in class, with six lecturers (ten per cent) indicating that it would be unfair to international students and 13 lecturers (22 per cent) stating that EMI should be English-only.

To examine students' perspectives, Kuteeva (2020) compared international (n=3) and local (n=2) students' attitudes toward English use and translanguaging practices at a Swedish university. The findings suggested that translanguaging, or codeswitching between English and Swedish, was common in student interactions and occasionally used by faculty. However, a non-Swedish-speaking student reported that the use of Swedish made them feel excluded from the discussion. Further, students indicated that translanguaging was only useful if all speakers in the group were proficient in both languages – creating what Kuteeva dubbed an 'elite' group of students with proficiency in both English and Swedish. These findings suggest that students share staff views that L1 use might exclude international students who lack proficiency in the language. Kuteeva (2020) concludes that '[t]his raises the question whether resorting to the local language in a linguistically diverse EMI setting is always pedagogically sound' (p. 297) or whether L1 use may disadvantage international students.

Hahl et al. (2016) took a different approach to L1 use by foregrounding issues with EM faculty's language proficiency. The researchers examined staff (n=11) and student (n=11) attitudes towards language use in an EM teacher education programme at a university in Finland. The programme was described as an ELF setting with many international students enrolled on the course. In semi-structured interviews, students reported issues with their lecturers' English proficiency, and content lecturers stated that it

was more difficult to teach through EMI than their L1 (Finnish). The lecturers used Finnish to fill in gaps in their English knowledge, and they relied on local students to translate for international students. However, many lecturers were uncomfortable with the power dynamics created in this situation and felt their professional identities were negatively affected. The findings from Hahl et al. (2016) join others (e.g. Karakas, 2016; Kuteeva, 2020; Roothooft, 2019) in suggesting that L1 use creates barriers to comprehension for international students, who require English translations to follow L1 explanations. Moreover, like other studies (e.g. Kim et al., 2017; Wang & Curdt-Christiansen, 2019), it found that L1 use resulted from language issues – in this case, issues with lecturers' language proficiency. The findings highlight the importance of supporting the language needs of content lecturers using EMI in addition to those of students.

In terms of L1 use and international students, Lin (2019) has argued that English is used on an 'as needed' basis in Taiwanese HE, meaning that English is used as a lingua franca when international students are present but that Chinese otherwise serves as the primary language of communication among local instructors, students and administrators. Lin states that this differentiation of language use presents an obstacle to the integration of international and local students in Taiwanese universities. In other words, distinctions between 'English-only' and 'bilingual education' on the basis of international student enrolment may lead to divisions between international and local students at EMI universities. In turn, this could potentially undermine any aims of intercultural exchange associated with internationalisation policy.

Despite reports that instructors avoid L1 use in classes conducted in EM with international students, studies have found that codeswitching occurs in classes with international students (e.g. Costa, 2012, in Italy; Sahan, 2020, in Turkey). Similarly, research has found that lecturers use the L1 during lectures at universities with English-only EMI policies (e.g. Chang, 2019, in Taiwan). These findings highlight a limitation of attitudinal research in that self-reported practices might not necessarily reflect the realities of classroom language use. To address this limitation, researchers have employed observational techniques to investigate classroom practices. The following section explores research into language use within the EMI classroom.

How do content lecturers and students use the L1 in EMI classes?

> **Main takeaways**
> - Classroom observation studies have indicated that the L1 is commonly used in EMI classes.
> - L1 use occurs mainly to clarify technical terminology or explain academic content.

In addition to interviews and surveys, studies have used classroom observations to examine lecturers' and students' L1 use in EMI classrooms. These studies have shown that EMI classrooms often do not achieve the 'English-only immersion' envisioned by policymakers (Evans, 2008b, p. 495) but that the L1 is used for a variety of purposes. This body of research complements the findings of research conducted in foreign language classrooms on the facilitative functions of L1 use (e.g. de la Campa & Nassaji, 2009; Lee & Macaro, 2013; Sali, 2014). Although extensive research has been conducted on the use of the L1 in foreign language classes, less research has investigated the use of L1 in EMI university settings (Macaro, Tian & Chu, 2018).

Studies conducted on language use in EMI primary and secondary schools have demonstrated that the L1 is frequently used for content teaching (e.g. Sah & Li, 2018; Wannagat, 2007). In Pakistan, Manan et al. (2017) reported that little or no English was used in their sample of secondary school classes that were nominally EMI. In Hong Kong, research has suggested that the introduction of EMI resulted in less student interaction (Lo & Macaro, 2012; Lo, 2015) and less high-order questioning from instructors (Pun & Macaro, 2019). The findings suggest that EMI may reduce the quality of classroom interaction. Less research is available on classroom interaction in tertiary EMI contexts, although preliminary research suggests that the L1 is used for a variety of teaching and learning purposes.

Research in EMI university contexts has analysed the frequency and functions of L1 use (e.g. Gotti, 2015; Moore, 2014; Sanchez-Garcia, 2018). Tarnopolsky and Goodman (2014) investigated codeswitching behaviour in content lectures using EMI in Ukraine. The findings suggest the L1 was used to establish rapport, discipline students and improve comprehension through explanations of content-specific terminology. Lecturers were found to switch to the L1 to explain subject-specific terminology when students were unfamiliar with a term. Similarly, Costa (2012) found that content lecturers using EMI in Italy codeswitched to the L1 even when international students were enrolled in their classes, most commonly to provide explanations of technical terms.

Mazak and Herbas-Donoso (2014) identified three types of translanguaging practices in EMI science lectures at a bilingual university in Puerto Rico:

1. content lecturers used key terms in English during the discussion or presentation of content in Spanish
2. content lecturers juxtaposed Spanish and English in course materials
3. content lecturers used English texts but discussed them in Spanish.

The authors concluded that these translanguaging practices reflected the status of English as the language of science and Spanish as the language of the local community.

To provide a more in-depth analysis of translanguaging practices, Mazak and Herbas-Donoso (2015) also conducted an ethnographic case study with a science lecturer who employed translanguaging methods in his class. Although Spanish was the primary language of communication in lectures and discussions, the textbook and course materials were in English. Based on the findings of the case study, the authors concluded that 'translanguaging served to apprentice the Spanish-dominant students into English for scientific purposes' (Mazak & Herbas-Donoso, 2015, p. 698). Together, these studies by Mazak and Herbas-Donoso (2014; 2015) suggest that translanguaging can be an effective pedagogical practice to teach scientific concepts in classes with bilingual students.

Similarly, Wang and Curdt-Christiansen (2019) found that translanguaging was commonly used for four purposes in an undergraduate business management programme at a bilingual university in China:

1. translating technical terminology
2. using both languages simultaneously to construct meaning
3. teaching in one language and providing summaries in the other
4. providing local examples in the L1.

The authors concluded that translanguaging pedagogies were possible because of 'supportive and flexible language-in-education policies at both national and university level' (p. 332). Thus, the findings of this study suggest that policies favouring bilingualism over English-only instruction may encourage multilingual teaching practices. However, the authors also noted that bilingual education was considered an easier model of EMI implementation than English-only EMI and that L1 use was often perceived as a result of inadequate English skills. As such, although the authors praised the university's bilingual education policies, the stakeholders involved in the study appeared to view translanguaging as necessary to overcome linguistic deficits, rather than a natural bilingual practice. Moreover, the authors state that 'translanguaging was not originally desired by students' but that the program's elite status and their experiences learning through the bilingual program contributed to their 'open attitude towards translanguaging' (p. 334). Nonetheless, translanguaging could be an effective resource for students with low English proficiency.

The initial reluctance of EMI students in Wang and Curdt-Christiansen's (2019) study towards translanguaging echoes the findings of Chang's (2019) study in Taiwan. Chang (2019) argued that translanguaging practices were observed but that participant content lecturers (n=18) had not embraced a translanguaging ideology. In other words, although lecturers were engaging in translanguaging practices, they had not rejected the English-only language policy of their HEI. Similarly, Moore (2017) found that Japanese university students drew on the L1 to complete EMI classroom tasks but continued to support their university's English-only policy. These findings suggest that, despite using the L1 themselves, some content lecturers and students may be hesitant to support translanguaging pedagogies or bilingual EMI policies.

Although the studies described above have suggested that translanguaging is common in EMI university classes, a study by Macaro, Tian, and Chu (2018) in China found that the L1 was rarely used in lectures conducted in EM. The study examined the proportion and function of L1 use in five content lecturers' classes at a top-ranked university in China in which EMI was used. The proportion of L1 and L2 used was calculated by counting the total number of characters/words in each language. The findings indicated that nearly all teacher talk (99.37 per cent) was in English, and little L1 use was found in the lectures. An examination of L1 utterances revealed that content lecturers primarily used the L1 to explain academic concepts (92.5 per cent of L1 utterances), often by providing a direct translation of a term or an explanation of an L2 term in the L1. In this study, although the L1 was rarely used, it served as a resource for academic teaching purposes. Furthermore, questionnaire responses indicated that students generally preferred their content lecturers to use English in class but believed that lecturers should use the L1 when students encountered language-related problems comprehending course content. These findings suggest that the L1 was perceived as a useful resource, although it was rarely used. Although Macaro, Tian, and Chu's (2019) study found that the L1 was rarely used in lectures conducted through EM, other research from China has suggested that L1 use may be relatively common, particularly for classroom interaction (Rose et al., 2020).

Overall, these studies have suggested that the L1 can serve as a useful resource for content teaching in EMI classes in which the content lecturer and students share an L1. However, the L1 should be used with caution in multilingual classes, since L1 use may prevent international students from understanding or participating in lectures. While such studies investigating EMI classroom language practices have been useful in terms of describing how the L1 is used, they have not offered conclusive evidence in terms of the effectiveness of translanguaging as an EMI pedagogy or how L1 use might improve learning outcomes (for evidence of improved L2 learning outcomes in a foreign language class, see Makalela [2015]; see *Success and challenges of studying higher education through English*). In other words, while this body of research has analysed the ways in which the L1 is used in EMI classes, it has not provided empirical evidence on the extent to which L1 use might improve content comprehension in EMI settings.

L1 use and EMI pedagogy: Is professional development the way forward?

Main takeaways
- Research is needed to evaluate the effectiveness of L1 use or translanguaging practices with respect to content learning.
- Teacher training programmes may be effective in promoting language-aware pedagogical practices in EM programmes. However, more research is needed in this area.

Although scholars have begun to conceptualise the pedagogical role of L1 in classes conducted in EM (e.g. Lin, 2015; Lo & Lin, 2015), empirical research has yet to evaluate the effectiveness of translanguaging practices on content learning. While data collected through classroom observations has indicated that translanguaging practices are common in EMI classes, the findings of these studies have suggested that the L1 might be used on an *ad hoc* basis (Macaro, 2019), according to the preferences of individual content lecturers, rather than in a principled or systematic way. Given that the primary aim in EMI contexts is content learning, there is arguably no harm in using the L1 – assuming that content lecturers and students share an L1 and that international (or non-L1 speaking) students do not feel excluded from the educational experience. However, certain pedagogical practices may be more effective than others in terms of content learning outcomes. While the functions of L1 use appear to promote content learning, e.g. through the clarification of terms or concepts, the extent to which the use of L1 is beneficial to content learning, particularly in comparison to L2 instruction, has not been established through empirical research. To borrow a concept from the literature on L2 learning, there may be an 'optimal' range of L1 use (Macaro, 2001, 2009) in terms of effective EMI pedagogy, although research has yet to establish what this is.

A theoretical argument for avoiding L1 use is that maximum exposure to the L2 may contribute to students' implicit learning of English, an oft-cited benefit of EMI. However, research on participants' attitudes has not found that this is a widely reported reason for opposing L1 use. Studies examining content lecturers' attitudes have indicated lecturers using EMI do not consider themselves language instructors (Airey, 2012; Block & Moncada-Comas,

2019) and rarely incorporate explicit language teaching into their EMI lessons (Costa, 2012; Moncada-Comas & Block, 2019). In other words, content lecturers using EMI do not tend to consider themselves responsible for language learning (Roothooft, 2019). Additionally, some research has suggested that EMI students prioritise content learning over language acquisition and prefer lecturers whom they perceive as effective in teaching content, regardless of the lecturer's language skills (Qiu & Fang, 2019).

Macaro, Tian and Chu (2018) have advised 'caution against unprincipled L1 use' by noting that '[t]here is no obvious harm in switching to L1 other than it stops the student trying to apply the kinds of inferencing strategies s/he may need to deploy in other contexts' (p. 17). In other words, using the L1 to teach content material might deny students the opportunity to develop communication strategies and discipline-specific academic skills in the L2. In their study, EMI students indicated a preference for explanations in English rather than L1 Chinese but stated that they were not opposed to L1 use when it was necessary to clarify conceptual understandings (Macaro, Tian & Chu, 2018).

One study that has attempted to evaluate the effectiveness of translanguaging pedagogy in EMI classrooms is a collaborative autoethnographic study in Japan (Fujimoto-Adamson & Adamson, 2018). In this study, the lecturer-researchers examined their teaching practices and the adjustments they made to their teaching style as they shifted from teaching EaS to EMI at two Japanese universities. The findings revealed that the lecturers were more open to L1 use and translanguaging practices in EMI settings than in EFL classes, because they perceived the primary objective of EMI to be content learning – not language learning. The lecturers reported implementing language-related scaffolding techniques in their content classes conducted through EM to account for their students' diverse L2 proficiency levels and encouraged student participation in the L1 during class discussions, especially among students with low L2 proficiency levels. The lecturers in this study had extensive experience (20+ years) working as English instructors and were knowledgeable of CLIL pedagogy, which they described as informing their approach to EMI. As such, the lecturers were language-aware and sensitive to language-related issues in EMI; research has indicated that this is not typical of university content lecturers using EMI, who have been found to resist the label of language teacher and refrain from explicit language-related

instruction in their classes (Block & Moncada-Comas, 2019). Nonetheless, Fujimoto-Adamson and Adamson (2018) reported that their stance on L1 use was influenced by their research on CLIL, suggesting that CLIL pedagogical training could promote language awareness among content lecturers using EMI.

The findings from a study on lecturers' beliefs in Spain (Roothooft, 2019) also offer some preliminary – although far from conclusive – evidence that content lecturers using EMI might benefit from CLIL pedagogical training in terms of incorporating language-aware practices into their teaching through EM. Roothooft's study investigated the beliefs of 59 content lecturers using EMI from five universities in Spain. While the findings of the study indicated that the majority of EMI lecturers focused solely on content in their courses conducted through EM, a sub-sample of lecturers (n=5) from the same Spanish university were among 12 participants in the study to indicate that they prioritised both content and language in their courses. This group of lecturers was unique in that they had received CLIL pedagogical training at their university and 'used terminology such as "scaffolding"' (p. 7) to describe their EMI teaching practices. Although this particular sub-sample of content lecturers using EMI is small, and although the impact of CLIL training was beyond the scope of the study, Roothooft suggests that:

> [I]t appears teacher training can influence lecturers' beliefs about the focus of classes conducted through EM, since the 5 lecturers in our sample who had attended training on CLIL at their university all claimed to focus on both content and language (p. 10).

As such, further research is needed to evaluate the potential benefits of CLIL pedagogical training for EMI teaching practices.

To date, studies have analysed L1 use in EMI classes but they have not demonstrated the extent to which L1 use affects learning outcomes, positively or negatively. Nonetheless, these preliminary (although limited) findings might suggest that professional development programmes can promote more language-aware pedagogical practices in EMI contexts. While the benefits of EMI teacher training require greater empirical investigation, Macaro (2019) suggests that the development of EMI professional development programmes should be mindful of university lecturers' professional obligations:

> [C]ontent specialists are busy people. Learning about language issues will be an additional burden to carrying out their research in their own field.

> *Some may be on the verge of making discoveries of huge importance to the planet and to the human race. I personally would fully understand if these academics said to me that 'EMI training' has to be firmly framed by that perspective* (p. 274).

While research has suggested that (many) content lecturers using EMI do not perceive themselves as responsible for language teaching, there is preliminary evidence (although limited) to suggest that professional development programmes could promote language-aware teaching practices in EMI contexts, thus potentially contributing to the integration of content and language in HE (Valcke & Wilkinson, 2017). However, models of EMI teaching training need to be realistic in terms of meeting the time constraints, motivations and professional responsibilities of university lecturers using EMI within and across HEIs.

Moreover, the primary qualification for university teaching is expertise in the field, usually in the form of a doctoral degree in the related subject. Additional teacher certification is not necessarily required in many EMI university settings (see *Content lecturer-related challenges*). Two recent studies on content lecturers' attitudes to EMI certification found that the majority of lecturers included in the sample had not received any kind of pre-service or in-service EMI professional development and that their HEIs did not require certification to teach in EMI (Macaro, Akincioglu & Han, 2019). The findings from both studies suggested that while the majority of teacher respondents were open to receiving EMI professional development, there was no consensus on how the training or certification programme should be implemented (Macaro & Han, 2019), and content lecturers appeared reluctant to dedicate time and resources to obtaining certification (Macaro, Akincioglu & Han, 2019). Given these findings, it remains unclear to what extent content lecturers using EMI and their HEIs might actively pursue professional development programmes.

We now turn to discussing the topic of student and faculty support in general.

9

Support systems

This section focuses on institutional support systems for students studying on courses conducted through EMI and content lecturers using EMI. Research into the challenges and attitudes of students and lecturers suggests that there are three overall guiding principles for the design and implementation of institutional support systems (Galloway et al., 2017; Galloway & Ruegg, 2020):

1. context specificity

2. needs analysis

3. globally orientated approach.

First, HEIs should develop their own support systems and recognise that there is no universal approach appropriate for all contexts. Second, context-specific support systems should ideally be based on a systematic needs analysis that identifies possible challenges to implementing an EMI-focused language policy. This may, for example, highlight gaps in English proficiency and coping strategies, and identify context-specific formats and timing of support for both students and lecturers. Such needs analyses should include ongoing consultation among key stakeholders, such as decision makers, administrators, students and lecturers. Third, a globally orientated approach to EMI implementation is needed that shifts the focus on 'native' English norms and acknowledges the use of English as a lingua franca. In what follows, models and potential elements of institutional support systems are discussed in detail.

Supporting students

Main takeaways

- Appropriate, contextualised institutional support systems are necessary as:
  - » English proficiency benchmarks for students are often low or non-existent
  - » there are huge variations in students' preparedness for EMI courses in terms of English proficiency, communication skills and strategies
  - » there is no conclusive research evidence that EMI results in improved English proficiency without focus on language.

- Support to students should be context-specific, ideally, based on needs analyses.

- Research on students' challenges in EMI suggests that support systems should focus on:
  - » subject-specific language skills
  - » receptive and productive skills
  - » strategies for effective communication
  - » intercultural competences
  - » affective challenges (e.g. confidence, self-efficacy, etc.).

As noted (see *Students' linguistic preparedness: What level of English?*), HEIs typically employ one of four models to ensure students' preparedness for their EMI studies:

1. the preparatory year

2. the selection

3. the concurrent/institutional support

4. the Ostrich model.

EMI literature suggests that extensive preparatory courses are offered in relatively few contexts. Research in Turkey and Saudi Arabia, for example, suggests that students often find them too general and not tailored to the needs of the specific programmes conducted through EMI. Preparatory courses were often found to focus on receptive skills (reading and listening), whereas students felt that enhancing productive skills (speaking and writing) was at least as important (McMullen, 2014; Macaro et al., 2016). As noted, the selection model of EMI involves setting English proficiency entrance requirements and limited language support is usually provided to students throughout the EMI programme. A recent large-scale study conducted in the UAE suggested an IELTS 6.0 as a benchmark that predicts academic success (Schoepp, 2018). However, as discussed earlier (see *Students' linguistic preparedness: What level of English?*), in some contexts the required English proficiency is very low or non-existent (Galloway et al., 2017; Rose et al., 2019). The fact that, more often than not, both the preparatory course model and the selection model fail to prepare students adequately for the challenges of an EMI programme necessitates the development of an appropriate institutional support system throughout the programme (Galloway & Ruegg, 2020; Schoepp, 2018).

Institutional support

Institutional or concurrent English language support is offered in various formats in many contexts. Three main themes emerge from the recommendations by studies into institutional language support:

1. what EMI language support should focus on

2. when and how EMI language support should be provided

3. who should provide this support (e.g. Chang et al., 2017; Galloway & Ruegg, 2020; Thompson et al., 2019).

What EMI language support should focus on

It is also important that the elements and focus of a support system respond to the challenges that have been identified by EMI students (See *Student challenges*). As outlined, research into the challenges students face revealed that these often centre around the following aspects of language and communication:

- subject-specific language skills and familiarity with different varieties (standard, non-standard, discipline-specific) of English

- receptive and productive skills

- strategies for effective communication (e.g. expressing their own ideas, answering questions and interacting with other students)

- intercultural communication skills (e.g. studying with international students)

- affective challenges.

A needs and syllabus analysis in a Korean context (Chang et al., 2017), for example, suggests that institutional language support should focus on writing; teach students how to develop, organise and paraphrase ideas in English; improve students' communication and presentation skills; and teach how to politely ask and answer questions and express opinions. The same study also revealed that students found specific rather than general language skills that are directly linked to the linguistic requirements of their specific disciplines more useful.

In addition to language-related challenges, EMI research identified affective challenges such as lack of confidence and feeling embarrassed and bored (Rose et al., 2019; Soruc and Griffith, 2018; Thompson et al., 2019). For example, a study in the Korean and Japanese contexts suggests that EMI language support should also focus on developing students' efficacy and confidence for two main reasons: first, as the supportive environment in the EMI language support classes was found to be a critical factor for the success of the programme (Chang et al., 2017); and, second, self-efficacy was identified as a predictor of EMI success together with performance in a language support course and L2 ability (Thomson et al., 2019). However, research in more mature EMI contexts reveals a different picture as regards student needs. In Northern Europe, students were found to need somewhat more time to achieve the academic results as in their L1 programmes, but in general they were found to be able to cope with EMI (Airey et al., 2017).

A small-scale study conducted in Turkey identified specific strategies students employ to cope with the challenges experienced in classes conducted through EM. Soruc and Griffith (2018) list the following strategies relating to the identified categories of the challenges:

1. cognitive strategies: asking questions, visualising, using prior experience, being specific, clarifying, exemplifying, looking for main ideas, thinking creatively ('out of the box') and thinking critically

2. to manage vocabulary difficulties: guessing from context, using a dictionary, using paralanguage (for example gestures), translating, using keywords and using visuals.

They also point out that the fewest coping strategies were identified to manage emotional reactions and to express their own ideas.

EMI research also revealed that the school–university transition poses linguistic and cognitive challenges to students, and although usually there is little or no transition provision, universities frequently offer introductory EAP courses to support students (Macaro et al., 2019a). In order to inform support systems for students, more research is needed to identify the specific challenges students face in the various EMI contexts and the coping strategies they employ. Explicit teaching of relevant learning and coping strategies can form part of a support system for students.

Student support in many contexts is provided in the form of ESP and EAP courses (Galloway et al., 2020). Anthony (2018) defines ESP as an approach:

> That targets the current and/or future academic or occupational needs of learners, focuses on the necessary language, genres, and skills to address these needs, and assists learners in meeting these needs through the use of general and/or discipline-specific teaching materials and methods (p. 5).

Following this definition, EAP is usually considered the branch of ESP that focuses on the skills and language that students need for their studies. In EMI literature and practice, however, a widely applied distinction seems to be that ESP courses typically focus on discipline-specific vocabulary, genres and conventions, whereas EAP refers to courses and support with students' general academic skills and usually focuses on academic writing and reading (e.g. Lasagabaster, 2018; Macaro et al., 2019b). This section will follow this latter distinction between ESP and EAP when discussing and illustrating different forms of student support.

Figure 8: Potential elements of an EMI student support system
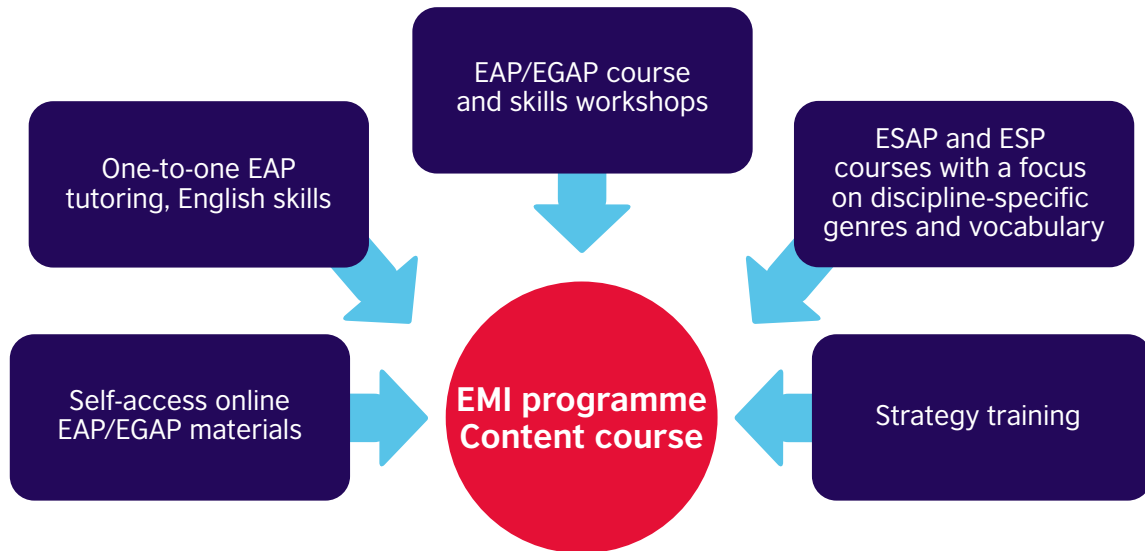
As presented in Figure 8, an institutional student support system can have the following potential elements:

- self-access online EAP materials
- one-to-one tutoring in academic skills and language skills
- an EAP course and shorter EAP workshops
- ESP courses (Chang et al., 2017; Galloway & Ruegg, 2020; Knudsen & Westbrook, 2013)
- strategy training (Soruc and Griffith, 2018; Thompson et al., 2019).

Self-access materials
EAP support is often provided in the form of self-access online EAP materials. These usually focus on academic writing, reading and presentation skills that are relevant to prepare students for studying and assessment (Galloway & Ruegg, 2020).

One-to-one EAP and general English skills tutoring
In some contexts, a university language centre offers drop-in sessions for individual tutoring. These sessions are tailored to the specific student's needs and often include general English skills development (Galloway & Ruegg, 2020).

Workshops
In addition, universities often offer EAP workshops that focus on specific skills, e.g. writing assignments, reading academic texts and giving presentations. Some EMI programmes are supported by semester-long EAP courses that focus on the basics of academic English, including skills that are essential for academic studies in English, e.g. academic vocabulary, writing, note-taking, listening and reading (Chang et al., 2017; Galloway & Ruegg, 2020).

ESAP and ESP courses
In ESP literature a distinction between English for General Academic Purposes (EGAP) and English for Specific Academic Purposes (ESAP) is made (Anthony, 2018; Nesi & Gardner, 2012). As language use and genres were found to be discipline specific, it is beneficial for students to provide discipline-specific EAP support targeting the discipline-specific academic needs of students. ESAP support frequently focuses on academic genres that are relevant for students' assessment, e.g. argumentative essays, providing evidence, and demonstrating knowledge and understanding of relevant concepts (Nesi & Gardner, 2012). In later stages of programmes conducted through EM, ESP courses are usually offered. The focus here is on the discipline-specific variety of English, and ESP courses include disciplinary vocabulary and disciplinary genres – e.g. lab reports and business reports (Chang et al., 2017; Galloway & Ruegg, 2020; Knudsen & Westbrook, 2013).

Strategy training

Although there is empirical evidence of strategies that students frequently employ to cope with the different challenges in EMI classes (Soruc and Griffith, 2018; Thompson et al., 2019), these findings do not seem to have been translated into support provision at universities. Given the benefits that strategy instruction can have on learners' proficiency (Zhang et al., 2019), it might be worth providing strategy training to students in the early stages of their studies conducted through EM. EMI research suggests that strategy training could focus on three areas:

1. coping strategies

2. strategies for effective classroom communication in ELF

3. intercultural communication strategies (Aguilar, 2018; Macaro et al., 2019a; Soruc & Griffith, 2018; Thompson et al., 2019).
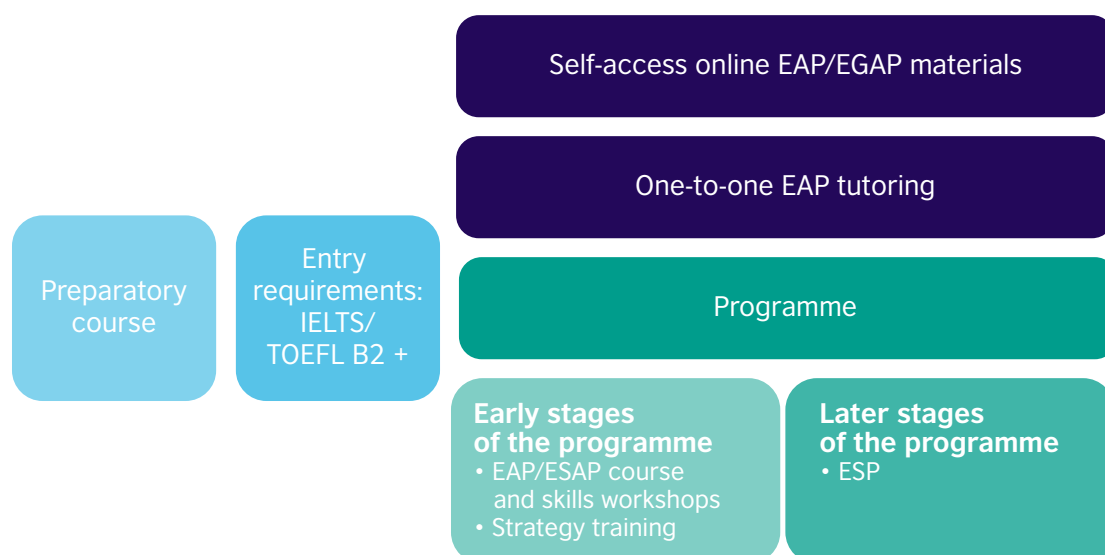
Given that HEIs in many contexts introduce EMI programmes as part of their internationalisation agenda, strategies to adapt to a different academic culture for international students might also be relevant. More research is needed, however, to identify the most critical strategies for academic success and how strategy training can be most effective in enhancing students' academic performance in EMI programmes.

When and how EMI language support should be provided

Most of the elements in Figure 6 can be offered at the programme level, although given that the ESP courses are more discipline specific, they may be more effective if they are embedded or offered in tandem with content classes (Chang et al., 2017). Figure 9 presents a synthesis of literature on the timing of the potential elements of an EMI student support system throughout an EMI programme. However, as there is ample research evidence that students' needs vary considerably in different contexts (Galloway et al., 2017; Macaro et al., 2019a; Rose et al., 2019), the design of an institutional student support system should be preceded by careful needs analysis – ideally at the EMI programme level. In some contexts, international students and local students might have different specific needs; therefore, support should be made suitable for both local and international students (Galloway & Ruegg, 2020).

An additional aspect to consider when scheduling language support classes is attendance as it was identified as an issue with EMI language support. For example, there was a steady decrease in attendance as the semester unfolded in Chang et al.'s (2017) study. Galloway and Ruegg (2020) reported that in some cases students were not aware of the language classes. Therefore, in addition to carefully designing language support, ways for its promotion should also be considered and put in place.

Figure 9: Timing of potential elements of an EMI student support system

Self-access online EAP/EGAP materials

One-to-one EAP tutoring

Programme

Preparatory course

Entry requirements: IELTS/ TOEFL B2 +

Early stages of the programme
• EAP/ESAP course and skills workshops
• Strategy training

**Later stages of the programme**
• ESP

The Bilingual Business Leader programme offered by Rikkyo University (Figure 10) is an example of an EMI programme where English language support and content classes are highly integrated. Students in the programme are provided with three types of English language courses:

1. an introductory general English and EAP course
2. a comprehensive EAP course
3. a subject-specific ESP course.

The introductory EAP course focuses on the basics of academic skills for studying in English, e.g. academic reading, discussion, listening, writing, presentation and note-taking skills. In Year 2, students are offered a comprehensive EAP course in which academic skills are developed further by introducing extensive reading and vocabulary studies to prepare students for the more content-based courses in the later years of their studies. At the same time, students start an ESP course which provides practice in reading subject-specific textbooks and research, and further develop their presentation skills. Still in Year 2, students start studying content-focused courses that are given slightly slower and clearer than usual. This way, students gradually transition from communication-focused courses to content-focused courses and are fully prepared for the last two years of the programme when business courses are mainly taught in English. In their final year, students participate in a business project where they work in groups and carry out a project in partnership with international companies in English.

Figure 10: Bilingual Business Leader programme offered by Rikkyo University

(http://cob.rikkyo.ac.jp/en/bbl/about.html)
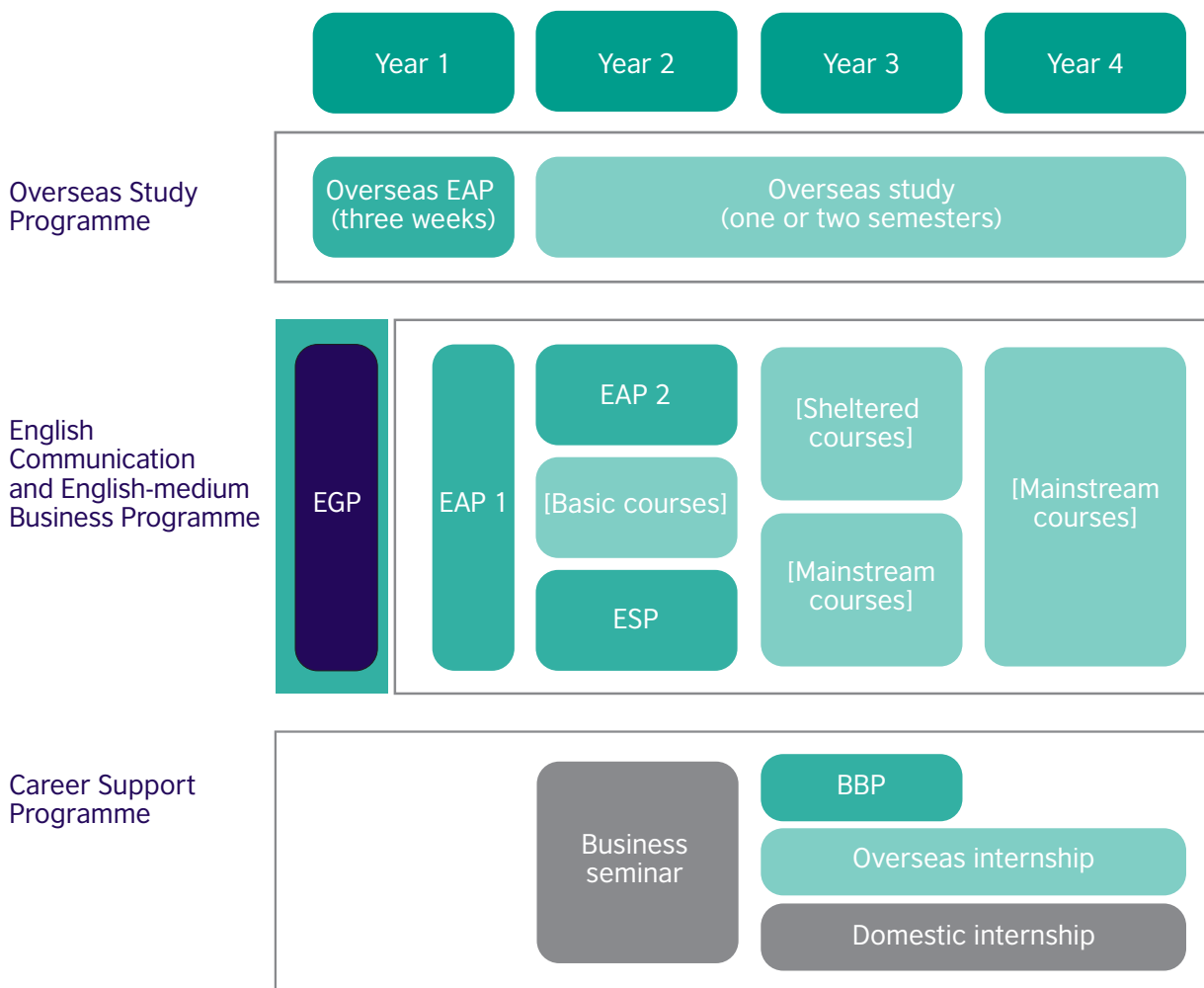
Who should provide this support?

As regards the question of who provides the support, the literature suggests that in most contexts, EAP lecturers and academic skills support staff provide EMI language support. A study conducted in Japan and China, however, found that students also expected content lecturers to help with their linguistic needs (e.g. Galloway et al., 2017).

Recognising that content lecturers often avoid dealing with language aspects in their classes, there have been calls for the provision of institutional support from language specialists. ESP and EAP instructors specialise in teaching the language used in a specific subject field and in academic skills and have been suggested to be in an ideal position to support EMI programmes with discipline-specific courses (Lasagabaster, 2018; Jiang et al., 2019). Research revealed that ESP lecturers often not only attend to students' development in English and their disciplinary knowledge, but in some contexts also develop students' intercultural skills (Aguilar, 2018; Yang, 2016; Woźniak, 2017). Given that the focus of EMI is on content delivery, yet recognising that students often experience numerous language-related challenges, team teaching has been suggested. Defined as 'collaborative work between a content lecturer and a language lecturer in an EMI programme in which the abilities of the team members complement each other to improve the learning results so that the whole is greater than the sum of its parts' (Lasagabaster, 2018, p. 401), it has been found to have a positive impact on students' learning and to be a rewarding and motivating experience for lecturers, helping them reflect on their pedagogical practices (Lasagabaster, 2018). In addition to team teaching, there have been calls for more collaboration between ESP/EAP and content lecturers (Galloway et al., 2017, 2020). Such collaboration, however, is not without its problems (Airey, 2016). The form of team teaching where the subject specialist and the language specialist give the EMI classes together might not be feasible for a sustained period in some institutions for financial reasons. Therefore, where this is not feasible, co-operation could take the form of EAP/ESP classes supporting content EMI classes. More research is needed to establish the costs and benefits of these or other forms of collaboration to support EMI programmes.

Overall, research in many contexts identified a gap between the provided EMI language support and the perceived needs of students (Galloway & Ruegg, 2020). Therefore, the provision of student support should be based on careful needs analysis that informs the course design about the following aspects:

- linguistic features of the discipline-specific variety of English – e.g. vocabulary (Bi, 2020; Liu & Chen, 2020)

- communication needs – e.g. interaction in class, giving presentations (Chang et al., 2017)

- format of support – e.g. timing, group or individual, online or face-to-face

- level of diversity as regards L1 and cultural background (Galloway & Ruegg, 2020).

Supporting content lecturers

Main takeaways

- The implementation of EMI programmes should go hand in hand with context-specific support systems developed for teaching staff.

- Institutional support systems should be integrated into the institutional structure in some form of professional development that incorporates pedagogical strategies and reflective practice.

- Institutional support systems should respond to three main types of challenges:
  - » language-related challenges
  - » pedagogical challenges
  - » challenges created by the culturally diverse nature of student groups.

- Co-operation between subject and language specialists should be encouraged to provide valid opportunities to develop students' English proficiency.

As discussed earlier (see *Content lecturer-related challenges)*, teaching on EMI programmes poses several challenges to content lecturers using EMI. These can be related to English proficiency and language in general and pedagogy, and might be the direct consequence of teaching multilingual and multicultural student groups. Research reveals that in many contexts there is a lack of appropriate institutional support for content lecturers when facing these challenges. A worldwide survey among content lecturers using EMI found that the majority of respondents had not taken part in any kind of training to improve their skills to teach through English (Macaro, Akincioglu & Han, 2019). Similarly, studies in a volume on EMI in Asia report the usual absence of systematic support systems for content lecturers using EMI (Fenton-Smith et al., 2017). Moreover, a study surveying the training practices for EMI in 70 European universities found that 68 per cent of them provided some kind of training programmes to content lecturers using EMI.
In most cases these focused on developing lecturers' general English language skills (77 per cent) and providing feedback in teaching sessions (54 per cent). Around half of them contained aspects of methodology for bilingual education, and surprisingly few (29 per cent) included elements of cognitive academic language proficiency (O'Dowd, 2018).
All of these studies emphasised the necessity of training for EMI instructors and highlight that these professional development programmes should go beyond general English language skills development

(Macaro, Curle et al., 2018). Survey results of a study on how Chinese content lecturers using EMI evaluated EMI training programmes indicated that they found the training programmes with supervised teaching practice and more focus on pedagogy more effective, and hoped for a more contextualised approach taking the realities of the Chinese HE system into account (Cheng, 2017).

Overall, a need for opportunities of continuing professional development (CPD) at the institutional level with a more systematic approach emerges from EMI research. These opportunities should be established and maintained parallel to implementing EMI programmes to provide teaching staff with the appropriate competences to deliver content classes in English to student groups from diverse lingua-cultural and educational backgrounds, and reflect on their own practices (Dafouz, 2018b). Studies point towards a list of essential elements of training programmes that can prepare content lecturers using EMI for teaching subject knowledge in English to diverse lingua-cultural student groups. These competences can be grouped into three main categories (Figure 11):

1. pedagogy
2. communication skills
3. English language skills.

In what follows these competences are discussed, highlighting their relevance to an EMI teaching context.

Figure 11: EMI content lecturer competencies
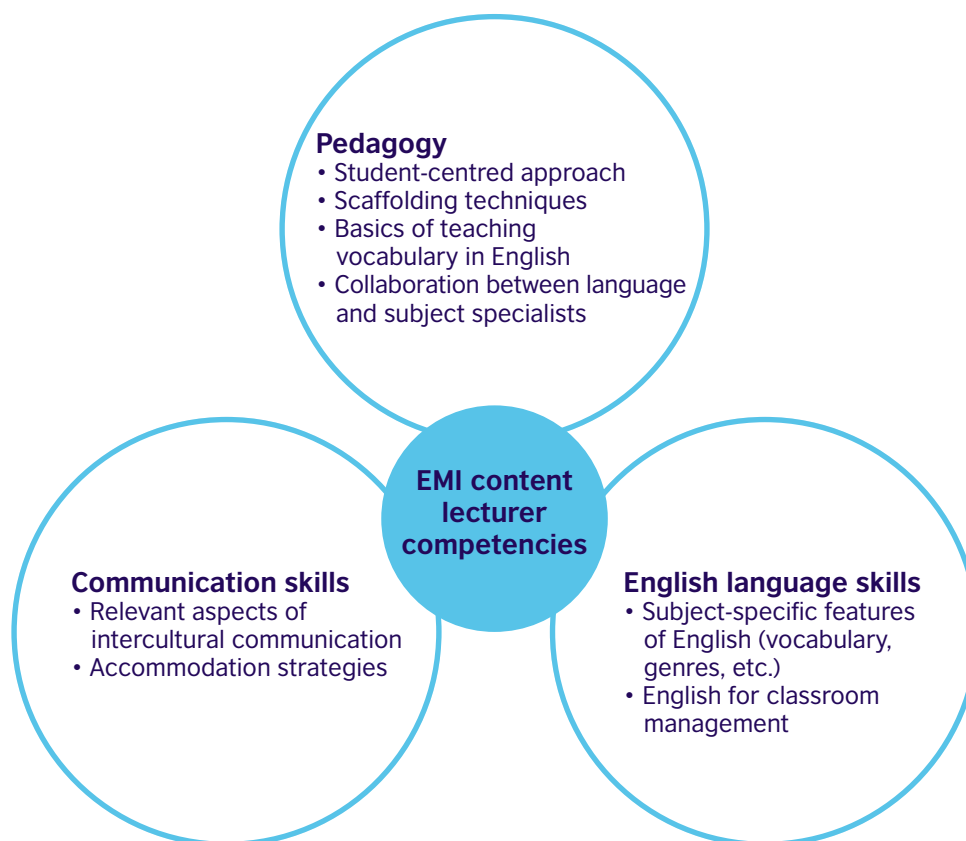
1. Pedagogy

Student-centred approach

This is an approach that aims to facilitate student engagement and requires students to be active and responsible participants in learning. Studies have found that a student-centred approach on an EMI programme was often very effective as the emphasis shifts from knowledge transfer to more active knowledge construction by students (O'Dowd, 2018). In some cases it was found to be more important than the English proficiency of the lecturer (Airey et al., 2017).

Scaffolding techniques

These refer to teaching strategies that provide temporary support to students in order to help them achieve higher levels of understanding. Such techniques include, for example, using visual aids during lectures and providing explanations with more common words. These techniques were applied successfully in EMI contexts to support student learning (Dafouz, 2018; O'Dowd, 2018).

Basics of teaching vocabulary in English

Vocabulary knowledge repeatedly emerges as a critical challenge in EMI (e.g. Soruc & Griffith, 2018). As discussed (see *Content lecturer-related challenges*), content lecturers using EMI were often reported to intend to provide terms and concepts in both English and L1 (Dafouz, 2018; Block & Moncada-Comas, 2019) (see *L1 use and EMI pedagogy: Is teacher training the way forward*?). Familiarity with basic techniques of vocabulary teaching, for example highlighting key terms at the beginning of the lecture, can provide lecturers with useful techniques for such purposes.

Collaboration between language and subject specialists

As noted, research suggests that there are several benefits of this kind of collaboration (Lasagabaster, 2018; Galloway et al., 2017; Galloway & Ruegg, 2020). However, content lecturers need a clear understanding of how language specialists can support them, what forms this collaboration can take and what the prerequisites of effective and successful collaboration are (Macaro et al., 2016).

Use of English and L1
As discussed earlier, there are context-specific practices of the use of L1 in EMI (see *L1 use and EMI pedagogy: Is teacher training the way forward?*). Content lecturers using EMI need to be aware of the effectiveness and consequences of such practices and the role of language in EMI classes in general in order to employ supportive strategies (Macaro, 2009, 2019).

2. Communication skills

Relevant aspects of intercultural communication
EMI classes, primarily in European contexts, are often diverse lingua-cultural spaces. In order for lecturers to be able to build rapport with students and communicate effectively they need an understanding of certain aspects of intercultural communication, e.g. a basic understanding of how culture influences communication, avoiding stereotyping and general cultural awareness (Aguilar, 2018).

Accommodation strategies
In many EMI contexts, English is used as a lingua franca, which necessitates that instructors are familiar with accommodation strategies. These are strategies that speakers typically employ in intercultural ELF contexts when they adapt their language to the immediate needs of other speakers in an interaction to achieve communicative success, e.g. repetition, completion and paraphrasing (Dewey, 2011).

3. English language skills

Subject-specific features of English (vocabulary, genres, etc.)
Research in ESP has highlighted that texts and genres used in different disciplines and subjects display subject-specific language features. These are probably most obvious in the case of vocabulary; however, nuances in specialised language use can include other language aspects, e.g. sentence structure and organisation of texts (Lasagabaster, 2018; Bi, 2020; Liu & Chen, 2020). Content lecturers using EMI may be familiar with the subject-specific vocabulary of their disciplines and aim to develop students' literacy in their specific subject fields; however, they might not be aware of other subject-specific features the texts in their disciplines display, e.g. how to develop an argument, present evidence and use quotes (Nesi & Gardner, 2012; Dafouz, 2018; Block & Moncada-Comas, 2019).

English for classroom management
As noted (see *Content lecturer-related challenges*), several studies revealed that lecturers – even those with high English proficiency – often find spontaneous communication in classes and giving lectures challenging (Macaro, Jimènez-Muñoz & Lasagabaster, 2019; Werther et al., 2014). Therefore, a relevant competence for lecturers is English skills for classroom management that focus on phrases and expressions to, for example, signpost lectures, give feedback and give instructions.

There are clearly many factors to consider when designing support systems and faculty training. It should be emphasised, however, that the specific elements and contents of institutional support systems and professional development sessions for EMI teachers should be selected and developed in a context-sensitive manner tailored to the needs and constraints relevant in the specific educational context (Dafouz, 2018). It should also be noted that there is little research into the effectiveness, content and models of delivery of professional development courses in EMI; therefore, further empirical studies are needed to identify additional relevant competences and effective ways to integrate them into teaching staff professional development.

Professional development programmes

Institutions can provide support in the form of seminars, short courses and training programmes developed by other institutions or offer financial or workload support to teaching staff to study for relevant certificates, diplomas or degrees (Fenton-Smith et al., 2017). EMI teaching development courses are also offered by some universities and service providers as short courses. This is an ever-expanding field, and details of some of those currently available are presented in Appendix 1.

There is also an increasing number of professional networks and associations that disseminate research findings and practical guidance for EMI lecturers and other stakeholders. The EMI Oxford Research Group and Network shares publications and presentations on cutting-edge research in the field of EMI on their website, and organises the twice-yearly EMI Symposium to discuss the latest findings, trends and practices in EMI. Teaching English and Teaching IN English in global contexts is an online EMI international network of researchers and doctoral students with a wide range of teaching resources, online webinars, blogs and interviews on EMI who aim to explore the linguistic and educational implications of the global spread of the English language.

Several European projects developed guiding principles and CPD materials for supporting content lecturers using EMI (EQUIIP, 2019; IntlUni, 2015; TAEC, 2019). Their training is typically developed in a modular format and includes materials to develop a wide range of relevant skills and competencies. Two examples – the Educational Quality at Universities for Inclusive International Programmes and the Transnational Alignment of English Competences Handbook – are presented in Appendix 1.

There are a couple of examples of massive online open courses (MOOCs) that universities and states have developed to enhance the professional development of content teachers in EMI. These MOOCs focus on English for lecturing and teaching diverse groups of students, and cover the most widely used models and frameworks in EMI globally. MOOCs appear to be a fast-developing field for global, national and institutional professional development. Details of two examples of MOOCs are discussed in Appendix 1.

The growth of EMI provision worldwide has implications for English language teacher education programmes. As the role of English language teachers seems to be expanding and increasingly includes tasks that go beyond general English language teaching, graduates of these programmes will need to be prepared for such roles. For example, the increase in the number of EMI programmes results in a growing need for ESP and EAP lecturers who are able to inform subject teaching and subject specialists about the language aspects of their disciplines and have the skills to develop language-sensitive materials, syllabi and pedagogy for and with content lecturers (Dafouz, Hüttner & Smit, 2018). Many MA TESOL and applied linguistics programmes have begun to respond to this by offering modules that provide an overview of, or a couple of sessions on, EMI (e.g. University of Bath, University of Edinburgh, University of Southampton and University of York). Very recently the University of Bath developed a full MA in English Medium of Instruction programme that aims to cater for this increasing need for language teachers with a good understanding of approaches and theoretical and practical issues in EMI. The course covers EMI topics relating to policy design, classroom pedagogy and strategies for intercultural communication with diverse student groups.

Overall, research into EMI suggests that support systems for both students and lecturers should be put in place parallel to the implementation of EMI programmes. It has been highlighted that such support systems should respond to context-specific needs. Further research is needed, however, into the effectiveness, efficient formats and optimal timing of support systems for students. Questions relating to the effectiveness of professional development training and successful integration of these courses and materials into institutional or sectoral CPD programmes remain unclear. These aspects need to be investigated further in order to adequately inform EMI decision makers and practitioners.

We now turn to quality assurance in EM higher education.

10

Quality assurance in English medium higher education

Main takeaways

- Several quality assurance frameworks have been developed to evaluate the quality of EMI programmes.

- A holistic approach to quality assurance is recommended.

- Quality frameworks are not based on empirical evidence of effectiveness, but rather EMI researcher-/'expert'-created standards.

- Comprehensive curriculum innovation and needs analysis is necessary to monitor and enforce high-quality standards.

How are English medium higher education programmes evaluated?

In Mok's (2007) critical evaluation of the internationalisation of Asian universities, he argues the importance of evaluating EMI programmes globally; holding universities to account for the teaching and learning they provide. He questions whether the effects of internationalisation, globalisation and the knowledge-based economy have improved the quality of education that students receive. While government funding allocation and global rankings of universities are often based on the number of EMI programmes offered, the quality of these programmes is not often independently evaluated. This has led to scholarly discussion and the development of quality standards for EM programmes in HE.

Quality frameworks

Various quality frameworks have been developed by national and international agencies and through projects, bringing together academics and experts in the field of EMI. These developments and the formalisation of programme assessment are an attempt to control and monitor the expansion of EMI programmes. Quality assessment and assurance are key to ensuring a high standard of education is practised across the globe (Caldwell, 1997).

Two local-level frameworks developed through projects in Turkey – the National Quality Framework in English in Higher Education, developed by the British Council and the Council for Higher Education in Turkey, and the Quality Development Programme (QDP), developed by the British Council – are presented in Appendix 2.

A number of European-level quality frameworks have been recently developed. Two of these frameworks are discussed in Appendix 2: a common framework for EMI quality developed through the Transnational Alignment of English Competences for University Lectures (TAEC) project and the English Medium Instruction Quality Management (EMI QM) certificate, developed by the University of Freiburg.

A quality assurance scheme intended for global use has also been developed by UK NARIC (UK National Recognition Information Centre), the UK's national agency for the recognition and comparison of international qualifications and skills, and Oxford EMI. The initiative was borne out of insights gathered through a global survey of EMI which indicated that in many countries the educational infrastructure does not support 'quality EMI provision' (Dearden 2014: p. 2). 'Quality' was operationalised here as:

- teachers being linguistically 'qualified' (i.e. 'proficient' in the English language)

- clear EMI organisational and pedagogical guidelines

- teacher preparation (i.e. teaching content lecturers how to deliver EMI content)

- CPD (i.e. in-service teacher support).

Dearden (2014) argues that these aspects can lead to 'effective' teaching and learning through English. The framework is presented in Appendix 2.

It should be noted that all of these quality assurance projects are in the early stages of development and/or deployment. Little empirical research has been conducted on the effectiveness and/or appropriateness of these frameworks. This is therefore a suggestion for future research.

Conclusion

To conclude, EMI is clearly a rapidly growing global phenomenon, albeit a complex one. Definitions and approaches vary. Researchers continue to debate the definition of EMI, what 'counts' as EMI, and to what extent language and content are or should be integrated into EMI programmes. EMI is contextually defined; there is no one model of EMI, or one single approach to EMI implementation. EMI programmes are diverse and vary by context and institution. Education programmes vary in their content and language learning aims and in the extent to which language and content are integrated. Usually, language learning is not an explicit aim of EMI programmes, distinguishing it from EaS, and research has demonstrated that content teachers often do not incorporate explicit language instruction in their EMI courses. Even when language learning is not an explicit aim of EMI, many stakeholders view EMI programmes as an opportunity for students to develop their English proficiency, yet there is mixed evidence concerning the effectiveness of EMI for English language development. Predictors of success in EMI are also under-researched. This needs further investigation in order to uncover where students require further support, how EMI may be better implemented to enhance student outcomes, and how this differs according to the academic subject being studied.

EMI is both a driver of and reaction to the wider internationalisation of the HE sector. However, there is presently no systematic data demonstrating the extent to which EMI is used around the world. Other factors affecting the implementation of EMI include:

- the driving forces behind its introduction
- official policies (or lack thereof)
- language support
- language requirements
- the amount of EMI within the programmes (e.g. full, partial, bilingual).

Given this diversity, research is needed to investigate and compare EMI practices. More research is also needed on good practices, including comparative studies to evaluate the benefits and challenges of particular models of EMI.

More research is also needed into the language support required for EMI students. Additionally, research has yet to establish clear benchmarks in terms of the English proficiency for EMI study. The relevance of proficiency tests which may be benchmarked to 'native' English norms should also be evaluated and interrogated, since research has shown the language practices of many EMI contexts resemble those of ELF or multi/bilingual communication.

EMI classes are inherently multilingual, and embracing multilingualism in EMI contexts might help to challenge the Englishisation of HE as well as support students' and teachers' cultural identities. However, more research is needed with respect to bi/multilingual practices (including translanguaging, codeswitching or the use of L1) in the following areas:

- using the L1 effectively for content learning in EMI classes
- incorporating multilingualism in classes with international students who do not speak the local language
- developing policies that embrace multilingual competences over English-only ideologies
- supporting vocabulary learning in EMI classes, including discipline-specific competencies in both English and the local language/L1.

In summary, research is needed to evaluate the effectiveness of L1 use or translanguaging practices with respect to content learning. Teacher training programmes may be effective in promoting language-aware pedagogical practices in EM programmes. However, more research is needed in this area.

Further research into the support systems for EMI students and teachers should especially focus on the following aspects:

- context-specific needs analysis in general and coping strategies employed by students in particular
- the collaboration of EAP/ESP and content teachers
- professional development for content lecturers using EMI.

Needs analyses in individual contexts are needed to identify the specific challenges students face. At the same time, research is also needed to identify the most critical coping strategies for academic success. An important aspect here is how this research can inform the design of support provision, for example developing strategy training sessions that can enhance students' academic performance in EMI programmes. Research is also needed to establish the costs and benefits of team teaching and to explore other forms of collaboration to support EMI programmes. The literature suggests a clear need for professional development for content lecturers using EMI; however, empirical studies are needed to identify and finetune competences necessary for lecturers and efficient formats of such training. Effective ways to integrate professional development into national, sectoral and institutional CPD should also be established for individual contexts.

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Appendices

Appendix 1: Professional development for content lecturers using EMI

Examples of online and face-to-face training courses and CPD materials available for HEIs to support content lecturers using:

Short EMI courses

Short courses are currently offered by Oxford EMI Training, Cambridge English, University of Leicester and Norwich Institute of Language Education (NILE).

Educational Quality at Universities for Inclusive International Programmes

Educational Quality at Universities for Inclusive International Programmes (EQUIIP, 2019) is a four-module CPD-intensive course that was developed by the EQUIP Erasmus+ project (2016–19). All materials (videos, handouts, worksheets, etc.) are provided on their website together with a suggested course schedule (Dafouz, Haines & Pagèze, 2019). The modular structure allows HEIs to select and integrate the elements that are relevant for their specific contexts into institutional CPD for EMI lecturers. The modules include different aspects of teaching in EMI programmes with a focus on the pedagogical and communication skills competences relevant for EMI lecturers: Introduction to the International Classroom; Internationalising Course Design; Intercultural Group Dynamics; The Role of Language and Language Diversity; and Feedback and Reflective Processes.

EMI Handbook

The *EMI Handbook* (2019) was developed by the Transnational Alignment of English Competences for University Lecturers Erasmus+ project (2017–20). It is a good example of training and materials for EMI lecturers. The *EMI Handbook* includes considerations, language points and intercultural skills that are relevant in EMI. All of these are illustrated by case studies, corpus evidence of language use, self-assessment in the form of can-do statements, and reflection points. The training materials cover most of the relevant EMI lecturer competences; however, there is a lack of considerations of disciplinary discourse, language variety features, and mixed ability groups which are often acknowledged as challenges by EMI lecturers (Dubow & Gundermann, 2017; Lasagabaster, 2018; Macaro et al., 2019b).

English as a Medium of Instruction for Academics

English as a Medium of Instruction for Academics is a MOOC offered by the University of Southampton on FutureLearn. This four-week practice-oriented online course explores issues that need to be addressed when teaching a subject to an international university class through the medium of English. The videos and readings provide an overview of the main approaches and research findings in the field of EMI. Topics include aspects of intercultural communication, for example stereotyping and cultural awareness, that are relevant when teaching culturally and linguistically diverse student groups. There is great emphasis on the use of English for lecturing and classroom management, with a focus on intelligibility and an English as a lingua franca approach.

English Academia EMI

English Academia EMI is a MOOC offered by the University of Tokyo. This is an online course comprising ten modules. Each of these focuses on different aspects of EMI, including definitions, contexts, driving forces, approaches and key stakeholders. It explores theoretical and practical issues relevant when implementing and providing an EMI programme. The course provides a general overview and includes research findings and approaches to EMI globally. Examples and some considerations specifically relevant to the Japanese and Asian HE contexts are also discussed. The course is an introduction to EMI discussing the most relevant models and frameworks. At the same time, it gives a thorough analysis and critique of some of the current EMI practices.

Appendix 2: Quality frameworks

Local frameworks

National Quality Framework in English in Higher Education

At a local level in Turkey, a quality standards scheme was developed. In 2018, the British Council worked with the Council for Higher Education in Turkey to 'set and monitor quality standards for English' in Turkish HE. In collaboration with the Turkish Higher Education Quality Board, a National Quality Framework in English in Higher Education was developed (British Council, 2018). Empirical evidence of the effectiveness of this framework has yet to be gathered. Nevertheless, in a scoping study preceding its development, the biggest obstacle to quality EMI in HE was an 'English deficit' given that students are not reaching the recommended CEFR B2 level to study successfully through English (Hellekjaer, 2010). Notable recommendations to address this issue included:

- improved entry assessment (i.e. assess students' suitability to learn through English)

- a more communicative approach to teaching (which may increase student motivation)

- improved assessment (i.e. create assessment that would have a positive 'washback effect' on learning).

Quality Development Programme

The British Council is also currently developing a framework to foster and facilitate greater collaboration in higher education. Named the Quality Development Programme (QDP), this programme is aimed at institutions that are foregrounding English as part of their internationalisation policy. It provides a lens through which to critically examine the approach taken to content delivery, to ensure that learners' needs remain at the forefront of HE teaching practice. Taking a broader perspective, this framework covers all three broad areas of academia:

1. administration
2. research
3. teaching.

This is operationalised into the focus areas of:

- institutional English language teaching policy and management

- curriculum and delivery of English in undergraduate and graduate programmes

- quality assurance and standards in English language programmes

- faculty and student performance in EM settings

- professional development of EAP and content lecturers

- language needs of academics and academic staff

- capacity for international research collaboration and publication in English.

Outputs of this programme include:

- a written report stating recommendations on how to improve English language provision within the university

- a presentation by the QDP team to the university board

- a discussion to flesh out an action plan

- ongoing support to implement this action plan.

The above points illustrate the programme's focus on supporting universities rather than simply ranking universities according to 'quality level', which may create a competitive butterfly effect.

European frameworks

Transnational Alignment of English Competences for University Lecturers

The Erasmus+ co-funded Transnational Alignment of English Competences for University Lecturers (TAEC) project took place between 2017 and 2020. Against a backdrop of rapidly expanding EMI programmes in Europe and concerns about language competency of non-native English-speaking content lecturers, quality of instruction, staff and student recruitment and local student retention, the project aimed to develop a common framework for EMI quality assurance and support. Involving several different European universities (in Denmark, the Netherlands, Spain, Italy and Croatia), the idea was that the framework and support would provide the base for the adaption of local training and language assessment in European HEIs, improving transparency and transnational recognition of content lecturer training, language assessment and teaching qualifications.

The framework was one of three outcomes of the project. The project also aimed to align a locally developed and used measure of English proficiency, the Test of Oral English Proficiency for Academic Staff (TOEPAS), to the CEFR, and develop an *EMI Handbook* (see Professional development programmes and Appendix 1). TOEPAS is 'an oral English proficiency certification procedure specially designed for the English language uses of university lecturers in English-medium instruction (EMI) courses and programs' (Centre for Internationalisation and Parallel Language Use, 2011: p. 3). The test is based on a simulated lecture that is assessed by trained raters, who are researchers and academic language consultants, specialising in SLA, EMI and EAP – with a scoring rubric focused on language 'including verbal elements of pedagogy', for example 'signposting, pragmatics, intonation, and emphasis' in addition to intelligibility, fluency and structure (Dimova & Kling, 2018: p. 642). Dimova (2020) examined TOEPAS and the influence of native speaker norms in written feedback rater reports and on lecturers' perceptions of English language proficiency and EMI classroom communication.

English Medium Instruction Quality Management certificate

The University of Freiburg developed the English Medium Instruction Quality Management (EMI QM) certificate. The certification procedure takes place in an authentic setting and integrates feedback from three perspectives: the students and the lecturers themselves, and experts on teaching in English. The assessment criteria include linguistic and communicative competencies relevant when teaching an international student body rather than focusing on general language competencies. Although in the assessment criteria of both of these tests emphasis is on certain aspects of English language proficiency, the EMI QM certificate includes the criterion 'intercultural transparency' that requests faculty to take a multicultural student audience into consideration and to stimulate their engagement (Dubow & Gundermann, 2017). Linguistic weaknesses were found in general and academic vocabulary, but not domain-specific terminology. This highlights the need for context-relevant practices.

Global frameworks

EMI Quality Mark

In August 2017, along with Oxford EMI, the UK's national qualifications agency (NARIC: National Recognition Information Centre) launched a scheme to rate the quality of English-taught university degrees worldwide. This scheme, named the EMI Quality Mark, works on a voluntary basis and universities opt in to be assessed. It aims to assess how English medium degrees are managed and provides guidelines for continued improvement. Programmes are assessed and rated on a scale of Gold, Silver, Bronze or Developing. Independent EMI experts evaluate programmes in four areas:

1. context and management
2. teaching and learning
3. admissions and student support
4. assessment and student outcomes.

Details of the four quality criteria against which institutes are assessed are publicly available online (see NARIC, 2018). This provides institutions with an extensive breakdown of all areas assessed.

The quality assessment process takes place in three clear stages:

1. document review
2. site visit
3. data collection (staff/student questionnaires and interviews).

In the document review stage, current EMI programme provision is explicated (i.e. programme information), along with the overall approach taken to implementing EMI (e.g. English language admissions requirements, institutional language statement/policy, and/or staff recruitment practices and CPD). During the site visit, classes are observed, meetings are held with managerial as well as academic staff who are involved in EMI implementation, and staff/students are interviewed/surveyed.

Once data collection is collated, an evaluation is made noting strong areas and areas for improvement and an EMI Quality Mark is issued. Despite its apparent robustness of measurement, to date, no empirical research has been conducted on the effectiveness, impact or possible unintended 'washback effect' of this quality scheme on teaching and learning in HE (or other levels of education); however, it does provide a starting point for discussion and debate surrounding ensuring the delivery of quality English-taught programmes across the globe.