

English for specific purposes in surging English-medium instruction contexts

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English for specific purposes in surging English-medium instruction contexts

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English-medium instruction (EMI) research increasingly reports on students' language-related challenges and a lack of academic and language support classes, collaboration between content and language teachers and overall teacher training. Our study explores EMI in Japan and China, two contexts where EMI has been referred to as emerging but is now "surging." In these contexts, EMI is closely linked to English language proficiency goals, yet research on supporting students remains scarce. Data were collected via interviews and focus groups with students, English teachers and content teachers, who provided insights into approaches to EMI policy implementation, stakeholders' attitudes, and the need for English for specific purposes (ESP) and English for specific academic purposes (ESAP). The results provide much needed insights for evidence-informed EMI policy implementation, curriculum development and teacher training. The study also provides insights into institutional infrastructure conducive to EMI policy, with findings revealing ESP needs of EMI students and the training needs of teaching staff. The study presented in this paper furthers the work that has been conducted in Anglophone settings on the complexity of ELT practitioner roles. The results also provide directions for future research.

Keywords: English for specific purposes (ESP), collaboration, English for specific academic purposes (ESAP), English language teaching (ELT), English for academic purposes (EAP), English-medium instruction (EMI) policy implementation

Introduction

Recent years have witnessed phenomenal growth in top-down English-medium instruction (EMI) policy initiatives in contexts such as in East Asia. Often

referred to as “emerging contexts,” these contexts, specifically China and Japan, seem more appropriately referred to as “surging” contexts, given the rapid and ongoing growth in EMI (see Wu & Tsai, 2022). Taking a commonly cited definition, EMI is understood as “the use of the English language to teach academic subjects (other than English itself) in countries or jurisdictions where the first language (L1) of the majority of the population is not English” (Macaro, 2018, p. 19). According to this definition, language learning is not an explicit aim of EMI, although it may be perceived as a possible benefit or implicit outcome of learning academic content through English (Rose & McKinley, 2024). The emphasis that this definition places on teaching academic subjects—rather than on teaching English—is in line with empirical research which has found that EMI teachers do not offer explicit English language instruction in class, nor do they perceive themselves as responsible for students’ English language development (Airey, 2012; Block, 2022).

Nonetheless, as in emerging EMI contexts across the globe, EMI in China and Japan is often conceptualised as a way to improve English proficiency (Galloway et al., 2017). The idea is that students will be skilled in both their subject area and in the English language, enhancing their career opportunities and contributing to the competitiveness of the nation. This belief in the benefits of learning English exclusively through English appears to be shared by students, with improvement of English listed as the main reason students enrol in EMI programmes (Galloway et al., 2017; Galloway & Sahan, 2021; Sahan et al., 2023). If EMI is indeed closely linked with English proficiency goals at the national, institutional, and individual level, then research on available English language support and stakeholder needs is crucial to ensure that this goal can be satisfactorily achieved, and that the curriculum supports this intended learning outcome.

Moreover, if improved English proficiency is an intended aim of EMI programmes, then it is necessary to understand whether students are adequately supported to study their discipline through the medium of English. Growing research on EMI has raised doubts as to whether this is being achieved, with reports on students’ language-related challenges (Rose et al., 2020b), a lack of academic and language support classes (Fang, 2018; Rose, 2021), and lack of collaboration between content and language teachers (Macaro & Tian, 2020). There is also an overall lack of teacher training, for both EMI content practitioners and English language teaching (ELT) practitioners who may increasingly find their role transitioning from teaching general English classes to teaching English for specific purposes (ESP), English for academic purposes (EAP) or English for specific academic purposes (ESAP) for EMI students (Galloway & Rose, 2021; Pei & Milner, 2016).

Our study responds to this need for further research on ESP in EMI settings to inform evidence-based EMI policy making. Data were collected in China and Japan, which we have identified as *surging* rather than *emerging* EMI contexts as many programmes are well established, yet they are experiencing the largest growth in EMI scholarship (see Wu & Tsai, 2022). Interviews and focus groups with students and ESP and content teachers provide an in-depth overview of evolving interpretations of EMI, current EMI policies and ESP provision, as well as staff and students' perceptions of such support. Our study stems from the need for EMI researchers, policy makers and practitioners to draw on ESP scholarship, much of which has been conducted in Anglophone contexts to date. However, it also builds on the need to not only explore perceptions towards ESP, but also to respond to calls to ensure EAP teachers are seen as important decision-makers, or gatekeepers (Palanac, 2022), deciding who enters or can transition to EMI programmes. Given concerns that they are seen as peripheral service providers, as "butler" (Raimes, 1991) or "handmaiden" (Hyland, 2006), our study explores their perceptions, particularly given the oft cited "Cinderella status" of EAP tutors (Charles & Pecorari, 2015, p.38). To explore the role of ESP in surging EMI contexts, this study addressed the following research questions (RQs):

1. What are teachers' and students' perceptions of students' ESP needs upon entering EMI programmes in Japan and China?
2. What ESP support is offered to students on EMI programmes in Japan and China?
3. What are staff and students' perceptions of the effectiveness of ESP provision on EMI programmes in Japan and China?

Literature review

With EMI closely related to the modernization agenda in various contexts and the expectation that graduates will be competent both in their discipline and in the English language to secure employment, it could be said that the English language needs of university students around the globe have changed. While students in many contexts may have taken general English courses while studying their university majors in their home language, many now do the latter through the medium of English.

The growing global phenomenon of EMI brings into question whether general English classes on, or before, EMI programmes are meeting students' needs. The oft-cited language-related challenges of students on EMI programmes include a lack of academic English skills and discipline-specific academic vocab-

ulary (Evans & Morrison, 2011). However, research reveals a lack of discipline-specific academic and language support in EMI programmes (Galloway & Rose, 2021). This is concerning given the close links between EMI and language proficiency goals in surging EMI contexts. Language needs vary from discipline to discipline (Kuteeva & Airey, 2014) requiring different types of language planning. The need for context- and discipline-specific support highlights the need for an ESP approach to language and academic support on EMI programmes.

ESP with its various sub-disciplines and diversified practices is central to research on language and academic support in EMI. Meeting the current or future academic occupational needs of learners through the use of discipline-specific content and material and supported by an analysis of the language used in specific disciplines is at the core of ESP (Anthony, 2018). As we have argued elsewhere (Galloway & Rose, 2022), much can be learnt from ESP scholarship for emerging, and surging, EMI contexts. “There are, and no doubt will be, as many types of ESP as there are specific learner needs and target communities that learners wish to thrive in” (Belcher, 2010, p. 2), and the global spread of EMI has certainly created a need for research into the needs of learners studying in surging EMI contexts, as well as how ELT practitioners can work in tandem with content specialists to co-create curricula suited to the needs of their students. However, research to date reveals a lack of vocational- and academic-specific English support for students studying on EMI programmes.

Examples of ESP support in Japan and China were reflected on by McKinley and Rose (2022) as taking the form of pre-sessional and in-sessional language support at the university level, in need of investigation. In secondary education, there were calls for ESP support for productive and receptive vocabulary learning for students transitioning to university EMI programmes in China (Evans & Morrison, 2011) and Japan (Aizawa & Rose, 2020). Few EMI studies have specifically looked at ESP. Galloway and Ruegg (2022) found that students are most positive about language support programmes when they are subject-specific. Thompson et al. (2022) reported on a bilingual business programme at a Japanese university, finding that ESP in the second year, after a year of general EAP, gave students more confidence to undertake EMI programmes. Their ESP scores (more than general language proficiency) were shown to best predict their EMI scores. So, while language proficiency is important, ESP was a better predictor of success. Rose et al.’s (2020a) study investigated the role of EAP course performance, language learning motivation, and general English proficiency on the performance of 146 students studying on an EMI business course. The EAP courses were discipline-specific, leading the authors to conclude that “language support might best be operationalized in the form of specific classes which target the vocabulary, language, and academic needs associated with the subject area” (Rose et al., 2020a, p. 10).

Galloway and Rose (2021) explored the impact of EMI on TESOL practitioners. Given that many now find themselves teaching on EAP, ESP and ESAP programmes, they call for such support, and for ESP teachers to be more central to EMI programmes and decision-making. They also call for universities to facilitate collaboration amongst ELT and content practitioners. Successful discipline-specific collaborations have been reported in EMI contexts, yet “studies on collaborative work are still in their infancy” (Lasagabaster, 2018, p.412) and the much-called-for collaboration between content and language practitioners has been reported to be “practically non-existent at tertiary level” (ibid., p.402). Such calls for collaboration resonate with calls within the field of ESP itself (see Wingate & Hakim, 2022) and for calls for more teacher training. Recent years have seen a growth in EAP and ESP teacher education courses, albeit predominantly in Anglophone settings to cater for the growing number of international students in such contexts. Professional organizations such as BALEAP have seen a rise in special interest groups and advertise several teacher training courses (BALEAP, n.d.), although there is no specific mention of preparing teachers for surging EMI contexts in the course descriptions.

It is important to acknowledge the wealth of research and advancements in teacher training and materials development in ESP research. Indeed, the role of the ESP practitioner has been explored for decades, particularly with regards to collaboration (see Dudley-Evans & St John, 1998). This can inform surging EMI contexts, where EMI policies are closely linked to English proficiency goals. Our study responds to this need, and to the reported lack of cross-fertilization between the fields of EMI and ESP (see point and counterpoint by Hakim & Wingate, 2022, and Galloway & Rose, 2022).

Methods

The data for this study were collected as part of a larger project (Galloway et al., 2017). Here, we revisited the data to focus analysis specifically on support provisions as they relate to ESP, EAP and ESAP courses. We use ESP here as an umbrella term to encompass the various language and academic support courses offered, but we refer to teachers in our study as English teachers, rather than ESP teachers, due to the overall lack of ESP support revealed in the study.

Data were collected through interviews and focus groups with students and academics at nine universities (Table 1). Initially 15 universities in each context (China and Japan), selected through purposive sampling to include a range of geographic regions and of disciplines, were invited to join the study. Leaders from the nine universities agreeing to participate helped to arrange site visits and facil-

itated contact with the teacher and student participants. This study focused on China and Japan as surging EMI contexts, because they represent contexts in which EMI practice and research has seen rapid growth accompanied by government support (see Rose et al., 2020b, in China, and Rose & McKinley, 2018, in Japan, for a discussion of policy).

Interviews were conducted with 37 students enrolled on EMI programmes: 28 local students and 9 international students from several disciplines: global studies ($n=14$), business and economics ($n=7$), science and technology ($n=5$), applied linguistics or related fields ($n=5$), liberal arts ($n=3$), Japanese ($n=1$), law ($n=1$), and theology ($n=1$). For each of these programmes, students studied their academic subject through English rather than Chinese or Japanese.

Interviews were also conducted with 19 content teachers and seven English teachers. Content teachers included nine local teachers and 10 recruited internationally. They taught applied linguistics ($n=3$), economics ($n=2$), history ($n=1$), international studies ($n=3$), law ($n=1$), literature ($n=4$), media communications ($n=1$), philosophy ($n=1$), political science ($n=2$), and sociology ($n=1$). ESP teachers included 3 local teachers and four from New Zealand ($n=1$), the US ($n=1$), and the UK ($n=2$).

In addition to interviews, focus groups were conducted with students ($n=8$), English teachers ($n=4$), and content teachers ($n=1$) at seven of the universities. While interviews were conduct one-on-one, focus groups were held with multiple teachers and/or students, to elicit and analyse data from group discussions of shared (or divergent) experiences. The demographics of the focus group participants are summarized in Table 2.

Table 1. Summary of data collected

| University (Country & Number) | Students | | English teachers | | Content teachers | |
|-------------------------------------|------------|-----------------|------------------|-----------------|------------------|-----------------|
| | Interviews | Focus groups | Interviews | Focus groups | Interviews | Focus groups |
| Japan1 | 8 | 1 | 1 | – | 4 | – |
| Japan2 | 2 | – | – | – | 2 | – |
| Japan3 | 10 | 1 | – | – | 4 | – |
| Japan4 | 4 | 1 | 2 | 1 | 4 | – |
| Japan5 | 4 | – | – | – | 4 | – |
| China1 | 2 | 1 | – | – | 1 | 1 |
| China2 | – | 1 | – | 1 | – | – |
| China3 | – | 1 | – | 1 | – | – |
| China4 | 7 | 2 | 4 | 1 | – | – |
| Total | 37 | 8 | 7 | 4 | 19 | 1 |

Table 2. Focus group demographics

| Group | University | (n) | Nationality | Field of study | Gender |
|--------------------|------------|-----|--|---|------------------------|
| Students-1 | Japan1 | 6 | Japan = 3 Switzerland = 1 Latvia = 1 Taiwan = 1 | Global studies | Male = 2 Female = 4 |
| Students-2 | Japan2 | 5 | Japan = 3 China = 1 Spain = 1 | Global studies | Male = 4 Female = 1 |
| Students-3 | Japan4 | 5 | Japan = 1 China = 2 America = 1 Canada = 1 | English education | Male = 3 Female = 2 |
| Students-4 | China1 | 8 | China = 8 | Business | Male = 2 Female = 6 |
| Students-5 | China2 | 5 | China = 5 | English education | Female = 5 |
| Students-6 | China3 | 7 | China = 7 | Language education | Male = 3 Female = 4 |
| Students-7 | China4 | 5 | China = 5 | Science & Engineering | Male = 1 Female = 4 |
| Students-8 | China4 | 6 | China = 6 | Engineering = 2 Business = 3 Journalism = 1 | Male = 2 Female = 2 |
| ESP teachers-1 | Japan4 | 3 | Japan = 2 New Zealand = 1 | ESP | Female = 2 Male = 1 |
| ESP teachers-2 | China2 | 4 | China = 4 | ESP | Male = 2 Female = 2 |
| ESP teachers-3 | China3 | 4 | China = 4 | ESP | Female = 4 |
| ESP teachers-4 | China4 | 5 | China = 2 America = 3 | ESP | Male = 3 Female = 2 |
| Content teachers-1 | China1 | 4 | China = 4 | Business | Female = 4 |

Data collection procedures

For data collection, Galloway visited each of the nine universities and conducted the interviews and focus groups in English. Instruments were piloted with students at a Japanese university first. Participation was voluntary, and pseudonyms are used throughout to protect the identity of participants. Teachers and students

were invited to participate in the study via programme administrators. Ethics forms and interview and focus group prompts were sent in advance of data collection to the programme administrators who helped coordinate the participant recruitment. Interviews and focus groups were audio-recorded and transcribed for analysis.

Data analysis procedures

Interviews and focus groups were analysed according to Selvi's (2020) procedures for qualitative content analysis. This iterative process involved developing a coding frame, assigning data to inductive categories, and generating definitions for those categories. In the initial round of coding, data were assigned to descriptive categories, which were then organized into a coding frame through the subsumption of categories and the creation of hierarchical levels (e.g., themes, categories, and sub-categories). The coding frame was discussed among the researchers until agreement was reached on definitions and interpretation of categories. Once the coding frame was finalized, data were assigned to categories and the analysis was checked by the researchers to ensure representativeness of the data. Themes were organized around the three research questions. The final coding framework is presented in Figure 1, which also maps these themes onto the research questions. Focus groups were analysed to capture the dynamics of group interaction, focusing on whole-group discussion. They complemented the one-on-one interviews by providing rich data examining how and to what extent participants agreed or disagreed on a topic and how participants changed their attitudes or explanations throughout the discussion.

Findings

Analysis of all datasets provided insights into students' support needs, the types of support offered, the entrance requirements of the programmes, and staff and student perceptions of the effectiveness of ESP support.

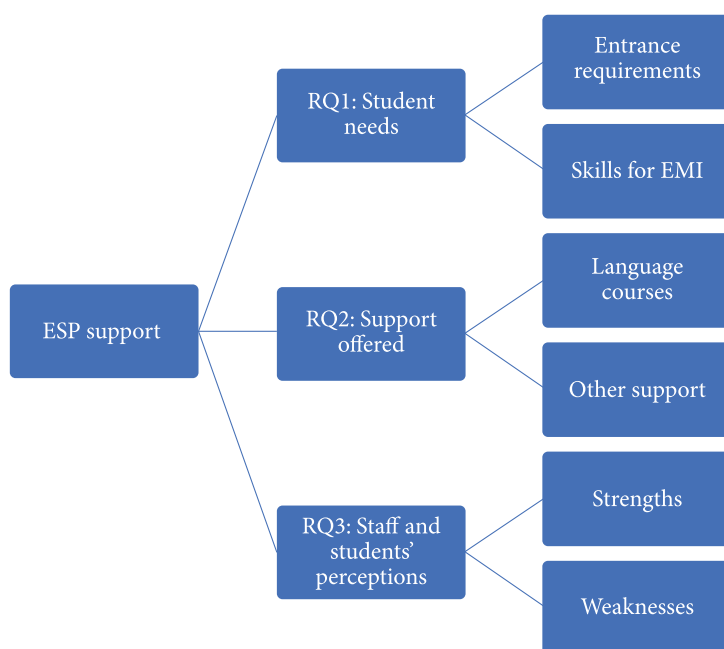


Figure 1. Coding framework for interviews and focus groups

Assessment of students' language-related needs entering EMI programmes (RQ1)

Entrance requirements for EMI programmes were examined to provide insights into students' needs. The EMI programmes included in this study were academic subjects taught through English; they were not separate language learning programmes within the department, nor were they English language classes. Entrance requirements therefore refer to the English language proficiency that students need to demonstrate before studying academic content through English on these programmes. The study revealed that requirements varied (Table 3). The universities in Japan and China relied on standardized exam scores, from either national entrance exams or internationally recognized English language tests.

At universities Japan₁, Japan₃, and Japan₅, students' English proficiency was assessed using their standardized English exam scores. These tests, usually the Test of English as a Foreign Language (TOEFL), were used to allocate them to language support classes in their first year (see "concurrent support model" in Macaro, 2018). At Japan₁, students were required to take the TOEFL twice, with the second score serving as an exit score from the language support programme, before they could advance to EMI content courses. A minimum score of TOEFL

Table 3. Summary of findings on ESP support

| Entry requirements | China | Japan |
|--------------------|--|-------------------------|
| | <i>Gaokao</i> ^a entrance exam | TOEFL/TOEIC exam scores |
| Year 1 | General English courses | EAP courses |
| Year 2 | – 4 skills | – Academic reading |
| | – Grammar | – Academic writing |
| Year 3 | No support courses | No support courses |
| Year 4 | – Self-study | – Self-study |
| | – Test prep courses | – Peer tutoring |
| | – Language centres | – Writing centres |
| | University China4: optional ESP course for some majors | – Fee-costing courses |

^a “Higher Exam,” the national undergraduate admission exam of China required by all higher education institutions.

PBT 500 or 550 was required to pass or place out of language support classes. This policy had a washback effect on the language support programme, where class resembled a “TOEFL class,” focused on passing the standardized exam (Yue, Global Business student, Japan1). Universities Japan1 and Japan3 also used TOEFL scores as a prerequisite for study abroad programmes. Once again, language support classes focused on test preparation, rather than discipline-specific support.

At all four universities in China, students and teachers reported that admissions to EMI programmes were based on the results of the national university entrance exam, or *gaokao*. At universities China1 and China4, *gaokao* scores were used to determine admission to EMI rather than Chinese-medium programmes. One student described the importance of this test for programme admission: “I didn’t choose this major, the major chose me, because I got a high score in [the English component of] the *gaokao*, so the major chose me” (Yujie, Business student, China1). Another student explained, “for the [EMI] programme, they tend to choose the students who have a higher score in English” (Lihua, Business student, China1), and in China4, students were divided into the EMI programme or the Chinese-medium programme according to their *gaokao* test scores. Thus, students were not always given the choice but were selected due to the notion that a higher score on a standardised non-discipline-specific, and non-communicative, national exam means they can manage EMI. As in Japan, there was no consideration of students’ discipline-specific language needs when enrolling on EMI programmes.

Students recognised that such entrance requirements were not a good measure of their ability to study on EMI programmes. Students in a focus group at Japan₁, for example, stated that a high exam score did not guarantee sufficient English competencies for EMI. One noted, “In Japan, a lot of people cannot actually speak in English. They may get a high TOEFL score but they cannot speak” (Student 4). This student connected English speaking skills with the learning tasks required for participation in an EMI class, specifically the ability to ask and answer questions and discuss academic content in English. The student’s comment suggests that speaking skills are necessary for active participation in EMI classrooms. Students in a focus group at China₄ reported studying English as a necessary component of the *gaokao* exam, rather than focusing on the skills needed for content learning in English. This idea was also expressed by an international student from China and supported by a local Japanese student in the focus group at Japan₄. Evident from these three focus groups, students studied English to meet the language entrance requirements but did not gain the skills or communicative competencies needed for EMI courses. One student also questioned the effectiveness of using the *gaokao* score for determining admission to EMI programmes: “This is not very good because some students will have no interest in the class being in English. But the Chinese group of students can choose to listen in the class, but you cannot get the credits” (Maria, law student, China₄). This student is critical of the exam-based entrance system because it disregards student motivation or “interest” in EMI, and it does not measure their ability to comprehend lectures taught through English.

As noted, such entry and exit requirements had a washback effect on the language support programmes offered by the university. However, our study reveals that they also influenced language support provisions.

ESP support (RQ2)

Overall, the findings indicated that ESP and ESAP courses were rarely offered. According to interviews and focus groups, the compulsory language support courses at each of the nine universities were general English or English for general academic purposes (EGAP) courses without a discipline-specific focus. Only one Chinese university offered optional, tailor-made ESP and ESAP courses for some majors (China₄). The three other universities in China offered only general English or EGAP courses without a discipline-specific focus in the first two years of the EMI programme. At each of the Japanese universities, English support courses were offered in the students’ first and second years of study, and students were often initially placed into levels according to their exam scores (discussed below). The language support courses at universities China₁, China₂, and China₃ were

described as general English courses oriented toward teaching grammar and the four skills of reading, writing, listening, and speaking, whereas EGAP courses with a primary focus on academic reading and writing skills were offered at the five universities in Japan. Compulsory language support classes were not offered after the second year, and neither were students divided according to discipline for them.

Commenting on collaboration between language and content teachers, in an interview, another English teacher from China⁴ (Daniel) reported that there used to be a co-teaching model for language support courses, whereby a content teacher and an ESP teacher delivered the courses in collaboration, as well as ESP elective courses. However, the elective courses were no longer offered because students did not enrol in them in sufficient numbers. Although ESP courses were not offered within the language support curriculum, an English teacher at Japan¹ stated that the textbooks and materials used for the composition courses were designed in-house, in collaboration with content teachers. Although not discipline-specific in focus, the composition class at Japan¹ included “models for the students” based on the input and examples provided by content teachers (Michelle, English teacher, Japan¹), thereby offering an alternative method for incorporating EMI students’ academic language needs in an EGAP course.

Although an ESP course was not offered as part of the compulsory language support curriculum, one university (China⁴) offered an optional ESP course to students in some departments, such as engineering and law. This was the only discipline-specific language support course offered at the universities included in this study. The ESP course was offered after students had completed the four general English courses required by the university, meaning that students normally enrolled in the ESP course in the third year of their programme.

In interviews, students and teachers at universities in Japan highlighted three other types of support available to students in Years 3 and 4 of their programmes, after they had completed their compulsory language support courses: peer tutoring, writing centres, and fee-costing English test prep courses.

Students at universities in China did not report additional options available through their universities, although some students enrolled in test preparation courses at private language schools, and an English teacher at China⁴ suggested that students could “go and talk to a teacher consultant” in the language centre if they experienced language-related difficulties.

In the absence of additional support courses in the final years of the programme, some students in China and Japan reported strategies such as self-study, visiting professors during office hours, asking classmates for help, and using internet resources to translate or find additional material. A student at Japan¹ stated that “it’s the students’ responsibility” to address their language needs, and another

student at Japan₃ noted that self-study was necessary to follow courses in English: “If students didn’t also study at home, it would be hard to keep up in class. Only participating in the class is not enough” (Hana, Global Studies student). Similar themes were discussed in six student focus groups. Students in both countries agreed that it was their responsibility to ask for help and overcome their language-related challenges through self-study. These findings suggest a lack of university resources (support systems) oriented toward developing EMI students’ discipline-specific or academic communicative skills. However, there were mentions of other support offered at these universities. The findings revealed that students were dissatisfied with the ESP support offered by the university, discussed next.

What are staff and students’ perceptions of ESP support? (RQ₃)

Four students from China₄ criticized the general English courses for failing to prepare students for their EMI classes. As one student stated: “It just tells us how to make conversation in daily life, but it does not help with my major. My major has many terms that are difficult to understand, that I have never seen before” (Cecilia, biotechnology student). Three students, one each from universities Japan₁, Japan₃, and China₁, stated that the language support provided by their university was effective, particularly in terms of developing the speaking and writing skills needed for EMI content classes. However, aside from these three, students in interviews stated that more language support was needed to help cope with the challenges of learning academic, and discipline-specific, content in English. Among other areas, students highlighted the need for:

- More discipline-specific language support, particularly in understanding technical or academic terms.
- More support with respect to academic communicative skills, including speaking and participating in class discussions.
- More ongoing language support in general throughout students’ four years of study.

With respect to ongoing language support, some students emphasized the need for this support to be discipline specific. One explained:

I think in the first year they could provide more English classes about Business English but not just English, but Business English... because in the first year I didn’t understand what the book said, because every word I couldn’t understand.
(Yujie, business student, China₁)

Similarly, students in three focus groups (universities Japan₃, China₂, and China₄) agreed that understanding discipline-specific terminology was the most challenging aspect of their EMI courses.

Students also indicated that they would benefit from ESP support before starting their EMI content classes (universities Japan₃, China₁, and China₂), including support during the transition to EMI classes (China₃), because there is “a big gap between high school English education” and university-level EMI classes (Student 4, focus group, Japan₃). Among the participants in this study, only (some of) the students in focus groups at China₄ believed that the language support provided by their university was sufficient for EMI programmes, particularly in comparison to what they perceived as the norm elsewhere in China. China₄ was also the only university providing ESP courses, offered to students in the third year. However, not all students from China₄ agreed that the language support was sufficient. Others emphasized a need for more discipline-specific language support:

- One second-year student suggested that the ESP support class came too late, since she was taking EMI content classes before the optional ESP course: “I am afraid that, if I can’t understand [my engineering courses in English], I will easily fail, and maybe it’s very hard, because, in engineering, maybe there are so many specialist English words” (Sarah, engineering student, China₄).
- Students in a focus group agreed that the ESP, or “English major”, course was offered too late in the curriculum: “When we have studied about six major classes, we will have the English major [course]” (Student 1, focus group, China₄).

Because support was offered too late, the students in this focus group stated that they relied on internet searches and translations to understand discipline-specific terminology in their EMI content classes before the ESP course.

In terms of teacher perceptions, one English teacher reported that “the professional words are the most difficult part [for the students], because that really influences their reading speed and influences their communication” (Valerie, China₄). Raising similar concerns about discipline-specific language, another English teacher stated that a needs assessment was necessary to improve the quality of the language support courses:

We need to find out what the students need from the 3rd and 4th year teachers, what skills they need. Like do they need communications skills, do they need advanced academic writing skills, if they’re writing a thesis, they need to know how to write a research paper. But then its discipline-specific, depending on which discipline those teachers [come from]. (Philip, English teacher, Japan₄)

The latter part of this teacher's comment demonstrates his perception that any needs assessment conducted should consider discipline-specific needs. Although these two English teachers suggested that students would benefit from more discipline-specific language support, English teachers in a focus group at China4 discussed the difficulty of teaching terminology because of nuances in academic meaning. One teacher in this focus group provided an example from political science or law courses:

I have one student who tried to debate with me, how do we call [the leader of China] in English. [The student said] we should call him president and not chairman, because I understand there's two systems, and you want to call him president in China. I guess it's quite weird to do it, and he suggested there are lots of papers and journal papers that will address him as president. So, you have to be really critical because this is [an advanced class], and when you use it, does it mean it's correct, right. We have this law class in English, and everything is used as president and not chairman, so I think it's correct to use president.

(English teacher 4)

The findings suggest a tension in terms of English teachers' preparedness to address students' discipline-specific language needs, and they raise questions concerning the role of ESP and content teachers in EMI programmes, the appropriateness of materials used in EMI contexts and the need for more context and discipline-specific resources.

Technical terminology was also highlighted by content teachers in a focus group at China1 who stated that the university should provide more support to students transitioning to EMI courses because, "the professional English and the general English, there is a big difference between them" (Content teacher 2). Content teachers at two other universities (Japan3 and Japan5) also believed that more ESP support was necessary to help students transition to EMI content courses in their first years of study, with the content teacher at Japan3 (Kei) stating that students would benefit from language support courses directly related to the academic content they were studying. This teacher, who worked in the global studies department, stated, "I think the EAP has moved too far away from the content. The reason for that is because there were complaints from the content professors that students don't know enough about what is going on in the world." Whereas the English teachers in the focus group at China4 were concerned about teaching the nuances of academic terminology, this content teacher appears to suggest that more content-related teaching is needed in ESP programmes, to expose students to the concepts they will be studying in English.

Students and teachers emphasized the limitations of the additional support available in Years 3 and 4. An English teacher (Michelle) at Japan1 described

the peer tutoring service as “more like peer mentoring. The tutor has taken the class they are in and helps with assignments.” It was therefore unclear to what extent peer tutoring addressed students’ discipline-specific language needs. Similarly, content teachers at universities Japan², Japan⁴, and Japan⁵ commented that the writing centre was designed to support students in organizing their academic papers but did not provide language-related assistance during the writing process. One content teacher stated, “I know we have the writing centre that does help with some things, but mostly organisation, they don’t proofread papers and they don’t really teach students how to write in English” (Richard, Japan⁴). A content teacher, Sho, at Japan⁵ similarly noted that the writing centre is “more academic skills” than language support. Furthermore, the additional options provided through writing centres appeared to lack a discipline-specific focus. Similarly, the additional courses offered at Japan³ were test preparation courses rather than classes designed to supplement students’ EMI content courses (see the section above on entry requirements and test preparation). Moreover, the cost of these additional test preparation courses was a barrier for some students: “Sometimes the schools offer special TOEFL classes, but I don’t go to these classes as they are expensive” (Kaya, global studies student, Japan³).

Regarding overall views towards the need for ESP support, English teachers at China⁴ agreed that students would benefit from discipline-specific language support but underscored that ESP courses should not just teach technical vocabulary, as was the model of the ESP engineering course: “They have a course called Technical English, they learn the technical terms in English so that they can be able to use English to talk about the subject, but I don’t think it’s very effective” (English teacher 3, focus group, China⁴). Instead, they suggested that ESP courses should be more closely integrated with EMI content courses. Moreover, the teachers in this focus group indicated that ESP courses were only offered for certain departments because the initiative to include an additional ESP course came from content teachers within those departments.

The final comment by English teachers at China⁴ appears to suggest that discipline-specific language support results from collaboration between English and content teachers in EMI programmes. Similar comments were made by English teachers in a focus group at China². These English teachers explained that the economics and business department had established an English teaching centre for business students to supplement the compulsory language support courses offered by the university.

Discussion

In these surging EMI contexts, our findings suggest that an assumption persists that EMI learners have the same general needs, neglecting discipline-specific language needs. This is reflected in how they are assessed on entry but also in the reports of general practices that do not take an ESP approach to ELT. This may also explain why research on ESP in EMI settings remains scarce (Jiang et al., 2019). Our study is limited in scope of its examination of ESP given the lack of support, but this itself is a key finding.

We call for more work measuring students' readiness for EMI across disciplines and the washback effect of large-scale proficiency tests on classroom practice, particularly given exit requirements (e.g., TOEFL as an exit score in Japan) that may be required. The study also provides preliminary insights into EMI students' ESP needs. Current provision and staff and students' perceptions of ESP have implications for teacher education programme design and wider university structures and for research in the fields of both ESP and EMI.

Teacher roles and identity in EMI contexts

Discussed extensively in the focus groups, many students felt that it was their own responsibility to manage their language-related challenges by asking for help themselves or through self-study strategies; our student participants also called for more ESP support. However, one of the key findings was the complex role, and perhaps identity crisis, of both language and content teachers. In this study, language teachers found themselves debating terminology with students and expressed doubts about their own knowledge of discipline-specific terms. At the same time, content teachers confronted language-related challenges in their EMI classrooms because the students' language support was "too far away" from what they expected students to know – although the content teachers in this study did not report providing language-related instruction or support themselves. Rather, they saw the need for a closer alignment between language and content courses, and language teachers felt discipline-specific linguistic knowledge would not be learned if it was limited to just teaching technical vocabulary, which may be difficult given the nuances in academic meaning. Thus, the lines were blurred in terms who should be providing what language support when.

The issue of who should provide language support classes has been discussed (Wingate & Hakim, 2022), but our findings call for more research into the implications of the spread of EMI on ELT and the role of ELT practitioners in these contexts (Galloway & Rose, 2021). It is clearly desirable for teachers to have knowledge of the subject because ESP integrates both the language and the sub-

ject content. This is reflected in increasing numbers of universities calling for ELT practitioners with subject-specific knowledge or experience teaching ESP.

Our study highlights the need to explore this transition from teaching general English to ESP as well as to scrutinise the effectiveness of current teacher training programmes for preparing English teachers to work in EMI settings (McKinley & Rose, 2022). ESP is an established field of study and indeed specificity in language teaching also has a long history. However, research is lacking on the effectiveness of training programmes for working in surging and emerging EMI contexts, as well as in-service teachers' needs for support. This poses a potential ethical conundrum for ELT training, as support of ESP preparation for EMI contexts may, arguably, make ELT teacher-educators complicit in a problematic trend (i.e., poorly understood expansion of EMI). This is beyond the scope of the present study but worthy of exploration in future research. To date, research on teacher training in EMI has focused on content lecturers, and we call for more research exploring how to support English teachers for this new, and ever-growing, world of EMI. Despite calls for increased collaboration in EMI contexts (Galloway et al., 2017), research examining this in practice is lacking. Based on our findings, we argue that content teachers would benefit from an introduction to ESP and ESP pedagogy (such as how to deal with discipline-specific terminology) as well as guidance on how to collaborate with their ESP colleagues to align language support courses with discipline-specific needs.

EMI programme structure

It is clear from our data that ESAP is central to the teaching in these surging EMI contexts. We agree with Lasagabaster (2018) that “ideally EMI courses should be underpinned by ESP and EAP courses, but unfortunately this is currently not the case in many higher education institutions” (p. 401). As in Fang (2018) and Rose (2021), the EMI programmes included little to no ESP provision (except as an optional course at one university). Only one instance of language and content teachers team teaching was reported, but it was no longer offered. Overall, the EMI programmes resembled Macaro's (2018) rather amusingly yet appropriately named, “ostrich model”. Despite pushes for further EMI provision, some of the universities in our study may be burying their heads in the sand and ignoring the growing research in the field of EMI that highlights the language-related challenges of students and ignoring ESP scholarship.

We call for more research on the transition to EMI, highlighting the need for more ESP support. It is deeply concerning that there are students like those in this study who “didn't understand” their coursebooks, found a “big gap between high school English education” and university-level EMI classes, and were con-

cerned about “fail[ing].” Students experienced understanding discipline-specific terminology as the most challenging aspect of their courses. However, the findings also highlight that ESP should not just focus on discipline-specific technical vocabulary, as demonstrated by the criticisms of the technical English courses. Despite the long history of so-called adjunct model EAP efforts (Benesch 2001; Johns, 1981), there remains a need for closer integration of the ESP course with the EMI content course and increased collaboration (Galloway et al., 2017; Galloway & Rose, 2021; Macaro & Tian, 2020), which teachers in our study were aware is lacking.

This has implications for wider university structures and the delivery of English classes by those housed in separate departments, which is clearly not conducive to collaboration. There is growing evidence for the role of ESP in EMI success (Rose et al., 2020a) in creating strong self-efficacy raising opportunities (Thompson et al., 2022). Further, some reports of deficient student understanding of subject matter are concerning and much has been written on potential domain loss with the lack of evidence-informed policymaking in EMI contexts (Wilkinson, 2013). As Flowerdew (2016) noted, while the new role of ESAP teachers is challenging, it may also lead to them having a more central, respected role in the university. With the mass and increasing implementation of top-down EMI policy, we call for more discussion on how such policy impacts wider university structures and how to give academic and language support programmes more central roles.

Conclusion and implications

Despite moves toward ESP, language support for many EMI programmes resembles general ELT. We call for more consideration of ESP, and specifically ESAP, in EMI programmes. ESP “is now a major player in both research and pedagogy in applied linguistics, with a large and growing contribution from researchers around the world” (Hyland, 2022, p. 2). Our study found limited ESP support, but it does provide insights into staff and student perceptions towards that lack of ESP. It is also limited by the absence of any policy analysis. Several aspects of policy analysis, such as that conducted by Rose et al. (2020b) that in further research would be useful for further interrogating the key arguments raised in this study.

We concur with calls for cross-fertilization between EMI and EAP/ESP researchers (Galloway & Rose, 2022; Wingate & Hakim, 2022). We also call for ELT to have a more central place in the wider university structure. English language teachers’ perceptions, and needs for that matter, provide much needed insights into EMI policy implementation in context. Our study calls for EAP

tutors to be recognised as crucial to the decision-making process, as well as acting as gatekeepers regarding students' ability to enter EMI classes (Palanac, 2022). Findings that national university entrance examinations scores determine whether a student studies through the medium of English also warrant further research. Comments that "this major chose me" because of their English score should be explored further. We call for further research in these surging EMI contexts into both admissions and support.

EAP tutors should not perform a peripheral service role as "butler" (Raimes, 1991) or "handmaiden" (Hyland, 2006) as reported in Anglophone contexts. Our study highlights that teacher roles are becoming blurred in EMI contexts. If English proficiency remains a key goal, then English teachers, or ESP teachers, and their departments, should have a much more central role in course provision, and in informing policy and programme structures.

EMI is certainly not a magical Aladdin's lamp. If English proficiency improvement is a goal, then students require support. The lack of ESP raises alarm bells regarding the student experience and student welfare and resonates with similar calls in Anglophone contexts regarding supporting international students. With the emphasis on making university students more marketable and more globally competitive, higher education in surging EMI contexts increasingly resembles the neoliberal universities in the Anglosphere (Block, 2022; Tupas, 2018). Inadequate student support may lead to reputational damage in the long run. We call for more research into the overall student experience in EMI settings.

Our study was small-scale involving self-reporting instruments, a limitation we acknowledge. We call for longitudinal studies that explore student satisfaction and the long-term effects of integrating support structures, teacher roles, collaboration, and teacher training. Such studies would also benefit from an exploration of stakeholders' views, including those involved in introducing EMI policy, to explore their perceptions surrounding the need for ESP support. Ethnographic studies in particular can illuminate these effects and could incorporate multi-modal data to overcome the limitation of analysing audio recordings and transcriptions. Discipline-specific language-supported EMI through strategic and purposeful collaboration between content and English language teachers is the action with the most potential for achieving learning goals in surging EMI contexts. It is also paramount that our EAP professionals are not seen as support staff, as "handmaiden to the 'proper' disciplines" (Hyland, 2006, p. 34), but as important members of the academic community that have a central role to play in decision-making.

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摘要 (Chinese abstract)

近年来，全英文授课（EMI）的研究越来越多地关注学生在语言方面的挑战、缺乏相关学术和语言支持课程、学科与语言教师间合作不足以及整体师资培训不足等问题。本研究探索了日本和中国的全英文授课实施发展情况。这两个国家的全英文授课尽管起步较晚，但现已迅速发展。现有研究表明，全英文授课与英语语言能力目标紧密相关，然而支持学生学习的研究仍不足。本研究通过对学生、英语教师和学科教师的访谈和焦点小组讨论收集了相关数据，对EMI政策实施、利益相关者态度以及特定目的英语（ESP）和特定学术目的英语（ESAP）需求提出了自己的观点。本研究为基于实证的全英文政策实施、课程开发和教师培训提供了切实可行的建议。此外，本研究还探讨了有利于全英文授课政策的体制基础结构，进一步阐述了全英文授课中学生的ESP需求和教学人员的培训需求。本文介绍的研究进一步推动了在英语国家环境中开展的对英语教学（ELT）从业者角色复杂性的研究工作，也为未来研究提供了方向。

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