10 Conclusion

Dynamic interactions across academic disciplines

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To summarize the discussions on the implementation of EMI in two Chinese-speaking communities in this volume, the ROAD-MAPPING framework (Dafouz & Smit, 2016, 2020) is adopted here in order to capture a dynamic understanding of the practice and process of EMI made by agents from different academic disciplines and with different perspectives. The six dimensions in the framework for elaborating the co-construction of the discourse on EMI are shown in Table 10.1.

Our summary starts at the last dimension in the table, Internationalization and Globalization (ING). ING is spelled out quite clearly in Chapter 1. In Taiwan, the goals of EMI as a language-in-education policy are “to promote college students’ English proficiency and broaden their international perspectives.” Meanwhile, in Hong Kong, internationalization in higher education is further envisioned as aiding the city’s development into a regional education hub. However, while the reports from Taiwan are jointly prepared by language specialists and content experts of these academic disciplines, they have the first goal, English as a means for internationalization, as their common interest. The promotion of college students’ English proficiency per se is relegated. Against this backdrop, reports from six different academic disciplines—namely, the medical sciences, math, information engineering, business, education, and linguistics—reveal various practices and processes in the implementation of EMI, which can also be broadly seen as pitching at two different levels: discipline/institution level and course/program level.

Practice and process of EMI at the discipline/institution level

At the discipline/institution level, a wide spectrum of practices is presented, with medical school at one end and linguistics and education programs at the other. A plug-in approach is found in the implementation of EMI in medical schools (reported in Chapter 2), in which EMI is viewed as an external entity to be attached to the existing education program. A balance between strong expert knowledge in medical science and good English skills is required, but without calling for major changes in the curriculum structure

Table 10.1 Conceptual dimensions of ROAD-MAPPING

Roles of English	RO	Refers to the diverse communicative functions that language fulfills in HEIs.
Academic disciplines	AD	Encompasses two-related notions: academic literacies (products developed in an educational setting) and academic culture (specific conventions, norms, and values that define the discipline).
(Language) Management	M	Refers to the language policy statements and documents and the body that controls and manipulates the language situation.
Agents	A	Encompasses the different social players that are engaged.
Practices and processes	PP	Encompasses an extremely broad category with many different teaching formats (e.g., teacher-fronted lectures, small seminar discussions, blended learning), diverse assessment methods, and distinct educational cultures.
Internationalization and globalization	ING	Refers to the different forces (i.e., local and global) that are operating simultaneously in most 21st century HEIs.

Source: Adapted from Dafouz & Smit (2020, p. 60)

or introduction of new pedagogical approaches, EMI courses are sidelined and then streamlined with the original medical education plan. Three levels of EMI courses, with a progression from general/liberal subjects to discipline-specific clinical studies, are suggested accordingly. Due to the heavy course work for fulfilling the professional qualifications of a medical doctor, the number of credit hours for EMI is limited. The provision of additional extra-curricular support for creating a positive environment in which local and international students can spontaneously communicate in English is another policy that could be implemented at the institutional level.

The case report on the transition to EMI in an institute of education in Hong Kong (Chapter 9) stands at the other end of the spectrum and can be taken as the flip side of the plug-in practice. There, EMI is reported to be a means for promoting the overall academic standing of the institution in the discipline of education. Various measures planned at the institutional level were adopted, including a language graduation requirement, provision of additional language enhancement programs, and further learning and teaching support. The role of English has thus gone beyond its functions in the teaching and learning of the disciplinary knowledge. It bears a strategic role in recruiting international students and academic staff, which in turn have direct consequences on the ranking of the institution. With the implementation managed at the institutional level, the vast effort invested is understandable.

The survey study of teachers' and students' feedback on the learning outcomes of linguistics courses in EMI (Chapter 6) shows another different scenario. Instead of reviewing the pros and cons of different methods and techniques, discussions were directed toward the effectiveness of EMI as a knowledge-making practice, which suggests that EMI is already infused in the teaching and learning activities of linguistic courses in the participating universities, and therefore there is no need to return to issues often addressed at the preparation stage. With the conclusion that "complete input of specialized knowledge should take precedence over the learning of language or globalization," suggestions for optimizing EMI in linguistics courses are made. Apparently, the switch from CMI (C for Chinese) to EMI in linguistics has not had a strong impact on the curriculum structure of the programs concerned, and the current focus is to provide supportive measures for individual teachers and students to optimize learning outcomes.

A quick comparison of the reports from the above three academic disciplines reveals how the role of English at the discipline/institution level can drive practices and processes. In the case study of the transition to EMI in an institute of education, discussed in Chapter 9, the role of English is complicated. The rationale for adopting EMI in this case is the promotion of internationalization, which serves as one of the means for attaining a higher academic standing. On the other hand, it is reported that the role of English at a medical university is relatively simple and straightforward. The utmost target of teachers and students of medical sciences is a high-quality medical education that can lead to professional qualification as a medical doctor, a process in which English language proficiency is not assessed. EMI courses in medicine can enrich students' professional careers in terms of internationalization but there is no immediate need that can drive this endeavor. The plug-in approach is a practical choice here, in that the scope of implementation can be controlled and any detrimental effects to the existing medical education program can be minimized. The same view of upholding high-quality training in disciplinary knowledge is shared by linguistics teachers. However, the switch from CMI to EMI is not deemed costly or high-stakes. In fact, English skills in general are considered important in language departments in Taiwan, for students who major in English as well as in other languages. A good command of English, as associated with a successful implementation of EMI, is an asset for students and teachers of language departments; therefore, a balance between the acquisition of the disciplinary knowledge in linguistics and an enhancement of students' English proficiency can definitely be maintained.

Practice and process of EMI at course/program level

Of the three reports on the practice and process of EMI at the course level, two concern writing. The training of writing research proposals for graduate students of information engineering (Chapter 3) is a hybrid of EAP and

translanguaging (Garcia, 2009). In this program, the role of students' first language in the development of thinking skills is in the limelight, but still the English language specialist plays an equally important role in the delivery of the research proposal. On the other hand, the summary writing program for undergraduate students of mathematics, discussed in Chapter 4, follows a more typical EAP approach. The course is jointly developed by a content expert and a language specialist and the focus of the training is in the writing process in academic English. As for EMI in a business school, attention is given to fostering students' skills in interactive communication conducted in English.

A transdisciplinary analysis of practice and process

From the practices and processes summarized above, we can see that each discipline has its own expectations of a successful EMI program, as viewed both at the discipline/institution and course/program levels. To some extent, the expectations can be considered to be the epistemological characteristics of these disciplines. In positioning the disciplinary nature of linguistics to allow for a comparison with the EMI outcomes of other disciplines, the hard/soft, pure/applied classification in knowledge-making practices proposed by Neumann et al. (2002) was introduced. The adoption of this classification served well as a good starting point to understand the various practices in different academic disciplines. For instance, our expectations that business management and information engineering will have different emphases in the development of EMI matches this classification scheme well, demonstrating the differences between a soft-applied discipline and a hard-applied one. Yet, for the wider spectrum of practices and processes observed in this volume, the discipline-specific knowledge-making practice is just one of the driving forces. Agents' expectations on the outcomes of the target disciplinary training and relevant vocational/professional qualifications also play a role. For example, both the medical sciences and information engineering are hard-applied subjects, but only the latter has shown a deep level of engagement in developing a new pedagogical approach in research method classes. The professional standard in medical education apparently outweighs the benefits of EMI. For soft-applied subjects, practices in education and business are found to be different also. Supplementary packages to support discipline-specific language use in the education discipline are produced to help content teachers to deliver better EMI classes. On the other hand, efforts for a deeper integration of English, including the use of local business cases presented in English medium and measures for enhancing students' interaction skills in English, are reported in the business discipline.

Two points need to be considered for conducting transdisciplinary analyses in the future. The first point is the scope of academic disciplines addressed in this volume. By no means can the six disciplines covered in this book be considered a good sample of the wide spectrum of EMI practices in

institutions of higher education. Nevertheless, they do display the dynamic interactions among academic disciplines, which point to a more complex picture. If more disciplines are involved in future research, it will require further investigation into the classification of disciplines and how they interact with other dimensions that were conceptualized in the ROAD-MAPPING framework.

Second, the interactions observed in the reports here may have involved a latent variable that connected the management role of the participating agents and the relative academic standing of their disciplines within the university. The two levels of practices, the discipline/institution level and course/program level, introduced in the beginning of this chapter, might reflect the agents' own roles or past experiences in the management of the EMI policy. For example, two reports in this volume, one from the medical sciences and one from education, were prepared by content experts who participated in the formulation and management of EMI policy at the institutional level. With such experience, it is quite natural that their discussions are pitched at the institutional level, and with a lens that captures a broader view of the discipline. Furthermore, in most situations, when an EMI policy is prepared, key stakeholders of the university, which includes representatives from academic disciplines that are higher in academic standing within the institution, are involved. Therefore, their voices should usually be heard and be considered in the formulation and implementation of the policy. In other words, a transdisciplinary analysis of the practices and processes in EMI needs to be ecologically sensitive so as to capture the dynamic interactions between the inhabitants of different academic disciplines.

Implications for the formulation and implementation of EMI policy

The reports of the six disciplines covered in this book reveal a complex picture of dynamic interactions across academic disciplines. Each discipline, following its disciplinary tradition, has its own expectations for employing EMI as a means for internationalization. Different participating agents show their own preferences in weighing the role of the first language, the significance of classroom structure, as well as supportive measures. These variations underscore the limitation of a top-down, "one-size-fits-all" language policy for EMI, a remark that is commonly found in the literature (Björkman, 2014). A comprehensive university is constituted of a wide spectrum of disciplines, both hard and soft, pure and applied. It is a daunting task to formulate a university-wide policy that by itself can accommodate the wide range of discipline-specific practices and expectations. To ameliorate this shortfall, the implementation of the policy should be supported by a well-resourced management structure that involves a wide participation of most disciplines within the institution, with a platform in which the top-down drives and bottom-up currents meet. For example, this platform could be tasked with developing a common framework that includes a language assessment system for EMI (Chapter 8) as well

as a professional development program in assessment literacy (Chapter 7). Assessing students' readiness for EMI in a specific discipline is more than a language placement test. It highlights the deeply interwoven relationship between disciplinary knowledge and language use, and the participation of disciplinary experts is required. Such frameworks and assessments will then lead to a community of practice in which subject teachers can plan for EMI courses and evaluate their own teaching practices. Fine-grained measures for enhancement of teaching and learning in EMI can be developed as well. A two-way street will be formed, in which the implementation of EMI not only benefits the English language teaching (ELT) profession with their best practices but also leads to innovative practices of its own. Last but not least, as the ecosystems involved in EMI are fast-changing, universities need to remain reflective and are advised to conduct self-evaluation (see Appendix : A checklist for EMI readiness, for example) periodically.

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